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New Jersey Department of Environmental Protection
Air Quality Permitting Program

Operating Permits Guidance Document
For Air Pollution Control
Permits/Certificates, and Operating Permits

Pursuant to N.J.A.C. 7:27-8 and -22

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NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

TITLE V

AIR QUALITY PERMITTING PROGRAM

OPERATING PERMITS GUIDANCE DOCUMENT

Part I
Defining Your Facility

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Acknowledgments

This guide covers the air pollution activities needed to complete an Operating Permit application. A subcommittee of the New Jersey Industrial Advisory Group (IAG) and a New Jersey Department of Environmental Protection internal task force developed the Operating Permit forms and approach to organizing data in various segments. The organization and various sections of the guide are based on the Minnesota Pollution Control Agency *Air Quality Permits Guide.*

The New Jersey Department of Environmental Protection thanks the IAG, the NJDEP internal task force, and other members of this Department (most notably those from the Air Quality Permitting Program) for their efforts in supplying data, providing forms, and writing descriptive guidelines.

Detailed Contents

Preface

The *NJDEP Operating Permits Guide* is a three-part document intended to help you learn if you need to apply for an Operating Permit. If you do need to apply, the Guide helps you fill out an application.

Part I - Defining Your Facility shows how to describe your equipment and quantify its emission. After defining your facility, you may or may not need to apply for an Operating Permit.

Part II - Determining Compliance tells how to comply with Air Quality Rules and Regulations and prepare the compliance portion of your Operating Permit application.

Part III - Making Changes defines methods for proposing modifications to the facility Operating Permit. It describes Administrative Amendments, Seven-Day Notice Changes, Minor Modifications and Significant Modifications and offers examples to guide you in choosing the appropriate mechanism for changing your Operating Permit.

You may find it helpful to read New Jersey's *Technical Manual for Air Quality Permits - Manual 1001*. It introduces you to New Jersey's air quality preconstruction permit program and permit application process. The manual is available either by calling the Bureau of Operating Permits or by downloading the document from the Air Quality Permit Program's Electronic Bulletin Board Service, described in *Section 10 of Guidance Document I.*

Please take your time going through each part of the Guide. Do not expect to read all parts in one day. You will find some things do not apply to your facility. Consequently, you probably will not need to read every section in detail.

To help you define key terms, the Operating Permit Application package contains a glossary and an acronym list. To answer your questions, we include phone numbers. In addition, we include ordering information in *Appendix A* should you want copies of the Air Quality Rules and Regulations.

IMPORTANT NOTE: The NJDEP has tried to make the *Operating Permits Guidance Document* as complete as possible. However, it is not a substitute for the Rules and Regulations themselves. We will revise the Guide periodically, but we will not update it each time that the NJDEP (or the EPA) revises or adds a specific requirement. It is your responsibility to find out which requirements apply to your facility.

Part I - Defining Your Facility

Part I of this Guide is an introduction to the New Jersey Operating Permit Rule. Under the NJDEP Rule, your facility may need a permit. The Guide helps you determine if your facility needs an Operating Permit and offers direction for completing an Operating Permit application.

Part I helps you:

- Define your sources of air emissions
- Calculate your air emissions
- Determine what Rules apply, and
- Assemble descriptions and calculations for an application (if you need one).

If you have questions about the material covered in *Part I*, you are welcome to call or write to the NJDEP for information.

NJDEP Air Quality Permit Program 401 E. State St., PO BOX 027, Trenton, NJ 08625-0027		
Operating Permit Information	(609) 633-8248	Responds to questions regarding how to obtain an Operating Permit application or application information.
Small Business Assistance Program	(609) 292-3600	Helps business with fewer than 100 Program employees to understand the Air Quality Rules.
Clean Air Act Small Business Ombudsman	(800) 643-6090 (609) 292-0700	Provides assistance to small businesses; helps to resolve complaints and disputes.
Air Quality Evaluation	(609) 633-1110	Provides information on Risk Assessment and Modeling.
Technical Services	(609) 530-4041	Provides information on monitoring and stack testing.
Engineering	(609) 984-3023	Provides information relative to combustion, NO_X RACT, and Incineration.
NSR and Synthetic Minor Facility Information	(609) 292-9258	Provides information on Subchapter 8 or how to employ permit restrictions to reduce Potential to Emit.

1.0 An Operating Permit

An Operating Permit is a comprehensive regulatory document that is enforceable. An Operating Permit lists the process equipment and air pollution control devices that you have and the Rules or Regulations that apply to facilities. Operating Permits also include operational requirements, emission limits, and monitoring requirements.

An Operating Permit, commonly called a Part 70 permit, is a type of air emission permit that the NJDEP issues to meet certain federal requirements. Part 70 refers to a section in the Code of Federal Regulations (CFR) for regulating air emissions from stationary sources. The Federal Clean Air Act Amendments of 1990 require that all states have Part 70 permit programs. A facility is a Part 70 source if its Potential to Emit air contaminants meets or exceeds specific emission thresholds. A Part 70 permit is valid for five years, after which it must be renewed.

Section 5.1.5 of this document helps you decide if an Operating Permit is needed for a facility. Other sections of *Part I* provide general directions for completing an Operating Permit application.

The New Jersey Operating Permit Rule is codified at N.J.A.C. 7:27-22, commonly referred to as ASubchapter 22."

1.1 Preconstruction Permits and Operating Certificates

The NJDEP issues Preconstruction Permits and Operating Certificates to facilities having the Potential to Emit smaller amounts of air contaminants than Part 70 sources. Requirements for compliance under these permits are less extensive than for Part 70 permits.

Facilities may also qualify for a General Permit. General permits cover a group of similar facilities, such as degreasers or paint spray operations. A general permit requires less individual processing by the NJDEP than a permit developed to meet unique requirements for your facility. Because of this, a general permit is quicker to obtain. Currently, the NJDEP has not developed any general permits.

1.2 Preconstruction Permit Program Transition

The period between the day the initial Operating Permit application is received by the DEP, and the day the approved Operating Permit is issued is the transition period. During that period, modifications to equipment that trigger a preconstruction permit change will remain the same. That is, you will continue to submit a preconstruction permit application under provisions of Subchapter 8 for such changes. However, upon receipt of an approved preconstruction permit during the transition period, the initial

Operating Permit application should be updated in accordance with the procedures described in this section.

For preconstruction permit approvals that are received prior to the initiation of the public participation process (i.e., during completeness review, technical review and permit drafting), the updated portions of the initial Operating Permit application that reflect the approved preconstruction permit should also be transmitted to the DEP in accordance with the procedures described in this section.

For preconstruction permit approvals that are received after the initiation of the public participation process, you are to follow Operating Permit modification procedures identified in Subchapter 22.

2.0 Air Pollutants Regulated by the NJDEP

2.1 Criteria Pollutants

The NJDEP regulates many air pollutants, some are labeled criteria pollutants. They are the pollutants having human health-based or welfare-based standards for the maximum amount allowed in the ambient air. Ambient air is the air the general public breathes. The following is a list of the criteria pollutants and reasons why they are regulated:

- Sulfur dioxide (SO_2) contributes to acid rain pollution and is a respiratory irritant.
- Oxides of Nitrogen (NO_X) are respiratory irritants. NO_X also contribute to acid rain and reacts with other compounds to produce smog and ozone.
- Inhalable particulates (PM_{10}) are extremely small particulate matter (less than 10 microns in diameter). Inhaling PM_{10} into the lungs can cause irritation and respiratory illness.
- Carbon monoxide (CO) decreases the ability of the blood to carry oxygen.
- Total Suspended Particulates (TSP) may cause respiratory irritation and are included in the New Jersey Ambient Air Quality Standards. Note that PM_{10} is a subset of TSP. Examples of TSP include liquid or solid particles such as dust, smoke, mist, fumes or smog.
- Lead (Pb) can cause anemia, brain damage, and nervous system damage.
- Ozone (O_3) is a respiratory irritant. Ground level ozone, a component of smog, is formed by reactions among volatile organic compounds, nitrogen oxides, and sunlight.

2.2 Volatile Organic Compounds

Most facilities do not emit ozone directly. Emission of volatile organic compounds (VOCs) contribute to ozone formation and are reported, instead of ozone. Some VOCs are also toxic. VOCs are found in solvents, coatings, lubricants, and most organic materials. The definition of volatile organic compounds is very broad. Volatile organic compounds are any organic (carbon) compounds other than those specified by N.J.A.C. 7:27-16 as having minor photochemical reactivity.

2.3 Hazardous Air Pollutants

Hazardous Air Pollutants are chemically specific volatile organic compounds and particulates. The 1990 Clean Air Act Amendments list 188 hazardous air pollutants. These are included in N.J.A.C. 7:27-22 as regulated pollutants with toxic health effects. *Appendix G, Tables A and B,* list the 188 chemical names and their Chemical Abstracts Service (CAS) numbers. The CAS number is a specific identifier used to confirm a chemical identity. This is very useful for chemicals with more than one common name. For example, methyl chloroform and 1,1,1 trichloroethane are both names for the same chemical. The CAS number is 71-55-6, the same number for either name. Product material safety data sheets usually provide both a chemical name and a CAS number.

2.4 Other Regulated Pollutants

Other air quality regulations add to the list of regulated pollutants. Accidental release provisions in the *Clean Air Act Amendments* cover 160 air pollutants. Stratospheric ozone protection regulations cover the phase-out of chemicals that deplete the ozone layer in the upper atmosphere. Regulations also include the maintenance (and repair) of equipment containing certain ozone depleting materials.

3.0 Operating Permit Application Walk Through

Table 3-1 suggests steps to follow when applying for an Operating Permit. The rest of *Part I* and *Part II* will take you through this process.

We have divided the Operating Permit application into logically grouped parts to make it easy for you to follow. In the past, you were responsible for obtaining Preconstruction Permits and Operating Certificates for specific new or altered equipment. Now, if you own or operate a major facility, you are responsible for applying for an Operating Permit. The Operating Permit will replace both the preconstruction permit and the certificate to operate in New Jersey. An Operating Permit is a comprehensive facility-wide air permit that contains information for the air emitting equipment and activities. *Table 3-1* references the major components of the Operating Permit application; these are:

- Part A - Facility Profile
- Part B - Facility Emissions Summary
- Part C - Significant Component Inventory
- Part D - Emission Unit Application
- Part E - Batch Process Application
- Part F - Compliance Plan (Described in *Part II* of the Guidance Document)

We discuss each of these parts in more detail in the following sections of this Guide. *The Operating Permit Instructions* provide more detailed, specific explanations of how to fill out, line by line, the application forms. As a note of assistance, it is helpful to make copies of all forms in the package to use for data collection and draft forms. Always keep a copy as backup.

3.1 Part A - Facility Profile

This part of the Operating Permit application contains the facility identification, certifications, and applicability determination. You should complete this part of the application first with the exception of the certifications, to determine if the facility is a major facility. You should also become familiar with the certifications since you will need to sign them after you have completed your application. The certifications emphasize the importance of completing the application truthfully, accurately, and completely. It is also important that you file the application according to the call-in

schedule as shown in *Table 9-1* and listed in N.J.A.C. 7:27-22.5 to avoid losing your application shield.

3.2 Part B - Emissions Summary

The emissions summary is divided into six sections that summarize information for the entire facility. You may want to start reading this part of the application and begin completing the sections on insignificant sources and fugitive emissions. However, the primary purpose of this part is to accumulate summary information required in *Parts D* and *E*. Therefore, we suggest that you complete *Parts D and E* before you concentrate on the remaining sections of *Part B* (other than insignificant sources and fugitive emissions).

To become familiar with *Part B,* categorize the equipment and activities into the three primary categories: significant, insignificant, and exempt as defined in N.J.A.C. 7:27-22.1. You are not required to include exempt equipment in this application. After you have completed this exercise, identify the areas in your facility that emit non-source fugitive emissions; that is, emissions that do not emanate from insignificant or significant equipment categories.

3.3 Part C - Significant Component Inventory

Use this part to list all significant pieces of equipment, control devices, and emission points at the facility. Do not list in this section any insignificant, non-source fugitive emission point or exempt sources. You may find it easier to fill in this section while you are completing *Parts D* and *E, Emission Units and Batch Processes*.

3.4 An Overview of Part D - Emission Unit Application and Part E - Batch Process Application

Before proceeding to *Part D - Emission Unit Application,* and *Part E - Batch Process Application,* take a moment to review the conceptual strategy used to assemble the forms and the information that we request you submit.

In *Part C* we asked that you inventory equipment, emission control devices, and emission points. In *Parts D* and *E,* you decide which format you want to use to present the data from the inventory. The first method is to report a single piece of equipment, or a group of equipment, as an emission unit. The second method is to report a group of equipment as a batch process.

Stand alone pieces of equipment will constitute an emission unit. Pieces of equipment with common exhausts, or physical commonalities that make the submittal of the data

easier to present and understand, if presented collectively, can also constitute an emission unit.

Manufacturing operations that normally relate to the chemical or pharmaceutical industries, involving multiple components, should be considered for the batch process method of permitting. An emission unit process is more likely to be a continuous operation, where raw materials enter production equipment as product is removed from it. Batch processes occur when raw material input and product removal do not occur simultaneously. Read the sections of this guide pertaining to these permitting methods and categorize your equipment accordingly.

After you have categorized the equipment into emission units or batch processes, you should list the equipment, control devices, and emission points for each emission unit and batch process. You may only describe a piece of equipment in one emission unit. However, you may describe control devices and emission points in more than one emission unit. You may describe equipment, control devices, and emission points selected for batch process permitting in more than one batch process.

An operating scenario means a plan for operating a facility or a portion thereof in a way, or according to a method, or using methods or processes, which are different from other methods or processes used at the facility, or portion thereof. An operating scenario may be incorporated into a permit through issuance of an initial operating permit, minor modification, significant modification, or authorized through a seven-day-notice.

Batch process applications involving many pieces of equipment use the operating scenario to describe a process line. We refer to the unit operations within a particular batch as a step. Therefore, naming the batch process operating scenario and the step identifies a unit operation.

3.5 Part D - Emission Unit Application

An emission unit means any part or activity of a stationary source that emits or has the potential to emit any regulated air contaminant or any pollutant listed under Section 112(b) of the Act. This term is not meant to alter or affect the definition of the term "unit" for purpose of Title IV of the Act.

If you have not already done so, you may find it helpful to read *Sections 3.3 and 3.4.* These sections help you categorize your equipment into emission units and batch processes (to complete *Parts D* and *E*).

After you have an idea of how to group your equipment into emission units, use the following discussion to help you complete the emission unit application forms.

3.5.1 Emission Unit Profile

After an emission unit has been identified, assign an ID number to it. This, along with your facility's designation, and a very brief description of the emission unit, is used to identify the equipment, control devices, and emission points described in that particular emission unit.

Identify each operating scenario described, and assign a Source Classification Code (SCC) corresponding to the operating scenario. SCCs are 8-digit codes used to categorize individual processes or unit operations which generate air emissions. The 8-digit codes are divided into four parts (x-xx-xxx-xx) which correspond to four hierarchial levels of source description. For instance, for two pieces of equipment, with each piece of equipment capable of operating in two different modes, there are four possible operating scenarios. Each operating scenario may correspond with a unique SCC. Each SCC has an average emission factor associated with it, although, facilities are encouraged to make any better estimates of a specific source's emission factor.

The latest SCC file is interactively located on the CHIEF Bulletin Board System as referenced in *Section 10* of this Guide. See *Appendix H* (SCC Codes) in this Operating Permit Application Package for a reference to the nearly up-to-date electronic listing of the SCCs.

In this section, show the total annual Potential to Emit (PTE) emissions from each emission unit. The PTE is the maximum annual emission rate from all operating scenarios described in one emission unit. In the compliance plan section, show exactly how you monitor the actual emissions to comply with this PTE limit.

3.5.2 Emission Unit Identification

The emission unit identification is a listing of each component (equipment, control device, and emission point) described in each operating scenario of each emission unit. Provide a brief description of each operating scenario with the SCC code.

For each piece of equipment and control device identified in the operating scenario, complete a *Supplemental Data Form* (formerly identified as a DEQ sheet).

3.5.3 Operating Scenario Descriptions

An operating scenario describes the physical arrangement of one piece of equipment and its associated control device and venting system in one operational mode or unit operation. Include information about identification, gas discharge rates and temperatures (*Part C*), and a diagram. The remaining information requested relates to

the maximum hourly rate for fugitive emissions and emissions discharging through the emission point(s) (including HAPs).

Do not confuse the fugitive emissions for the equipment described in the operating scenario with the non-source fugitive emissions requested in *Part B, Section 24.*

If the equipment operates in a cyclic manner (e.g., filling a reactor, reaction A, reaction B, distillation, etc.) you may show the worst case emissions from this equipment for the cyclic process.

3.6 Part E - Batch Process Application

A batch operation, as defined in N.J.A.C. 7:27-16, means a type of manufacturing process in which fixed amounts of one or more process materials are introduced into a manufacturing process vessel where they are retained for a prescribed amount of time during which they are converted. Starting materials for a batch are not introduced into the vessel until the previous batch has been removed. See also, *Section 4.2.3*.

Applicants are encouraged to used batch process application, if the equipment used in the operation has a finite time compare to continuous usage, and the same equipment can be used to manufacture variety of products.

If you have not already done so, you may find it helpful to read *Sections 3.3 and 3.4.* These sections help you categorize your equipment into emission units and batch processes (to complete *Parts D* and *E*).

3.6.1 Batch Process Profile

After you have identified the batch process, assign it an ID number and include, a very brief description of the batch process, how many operating scenarios, pieces of equipment, control devices, and emission points in the batch process application. In this section, show the maximum total annual emissions, or Potential to Emit (PTE), from the batch process. The PTE is the maximum annual emission rate based on the maximum rated capacity of the equipment from all operating scenarios described in one batch process application. In the compliance plan for this batch process, show how you comply with these emission limits through recordkeeping, monitoring, and recording.

The batch process application forms provide a method to record existing emissions and any pre-approved future changes at your facility. Therefore, NJDEP can automatically update your Operating Permit application on the date of the pre-approved changes.

3.6.2 Batch Process Component Inventory

The component inventory requires you to list each component (equipment, control device, and emission point) involved in each batch process. We ask specific information for each component. For the equipment and control devices we require you to complete a *Supplemental Data Form* (formerly identified as a DEQ sheet).

After completing the operating scenario identification and designation, we ask that you complete a table showing the physical relationship of each set of components (equipment, control device, emission point) for each step of each operating scenario in the batch plant process. Each step is analogous to a unit operation. We require that you provide a brief description of the step (reaction, filling, etc.); the process step time; VOC emission rate, if applicable, (this may involve several steps); and gas discharge temperature and flow rates. For each step, provide the emissions for criteria and regulated air pollutants.

Also, for each batch process operating scenario, provide the emissions for the entire batch. This is an absolute number, without time (i.e., pounds per batch as opposed to pounds per hour). The compliance plan establishes the necessary recordkeeping, monitoring, and reporting methods to ensure that annual operating scenario emissions do not exceed the total annual emissions reported in *Part D, Section 20* of the *Operating Permit Application.*

Table 3-1
Operating Permit Application

Step	Part	Items to Complete
1	*Part A* *Facility Profile*	Identify facility location and it's owners and managers. Determine applicability of facility to Title V permitting.
2	*Part B* *Facility Emissions Summary*	Prepare insignificant source data and non-source fugitive emission point data.
3	*Part C* *Significant Component Inventory*	Identify all significant emission emitting components.
4	*Part D* *Emission Unit Application*	Compile detailed emission unit information.
5	*Part E* *Batch Process Application*	Compile batch process operation information.
6	*Part B* *Facility Emissions Summary*	Calculate potential emissions or PTE from each of your emission units, batch processes, Intra Facility Emission Trading, non-source fugitives, and insignificant sources. Review Potential to Emit from your facility and evaluate whether an Operating Permit is needed based on potential emission levels. If not, see whether we require a permit because of National Emissions Standards for Hazardous Air Pollutants (NESHAPs) or New Source Performance Standards (NSPS). If we require an Operating Permit, continue with the application, otherwise stop.
7		Identify all requirements that apply to your facility to help you in completing your compliance plan.
8	*Part F* *Compliance Plan*	Go to *Part II - Determining Compliance* to develop the compliance information needed to complete your application.
9	*Part A* *Facility Profile*	Review permit application for completeness and accuracy and sign the certifications.
10	*Table 9-1* *Guidance Document Part I*	Submit your application to the NJDEP by the due date.

4.0 Defining Your Facility

Your Operating Permit application "defines the facility" by detailing the facility's location and components. Some facilities have a fixed location, like a factory or school while others are portable (like asphalt plants). A facility includes all buildings and structures on connected pieces of property under common ownership or control. However, some operations have parts of the same facility across the street from one another. Also, some facilities may have supporting operations on-site with different owners. In this situation, your Operating Permit could cover all of the facilities as a single site.

The major Standard Industrial Classification (SIC) code helps to define a facility. The SIC code is a four-digit number used to identify industries. The first two digits are the "industry group" of a facility. For example, industry group 20 is "Food and Kindred Products." The last two digits of the SIC code identify the specific type of facility. For instance, Cereal Breakfast Foods manufacturing has 43 as the last two digits (SIC code 2043). You should consult the US Department of Labor at (609) 292-2633 for the facility's registered SIC code.

4.1 Emission Points

An emission point is the location where you physically release emissions into the atmosphere. An emission point can be a stack, a wall vent, the general building ventilation exhaust, or a window. The permit application needs to identify the emission points at the facility. Stacks are the easiest emission points to identify. Systematically identify all emission points and put them on a drawing. Labeling each emission point with a sturdy tag or marking is helpful. You should use weatherproof labels, so that the emission point is clearly and permanently labeled. Note any special conditions about the emission point, such as a stack with a rain cap, sampling ports, or monitoring devices. Note any unusual odors, visible emissions, or deposited materials near the stacks.

After you have finished listing the emission points, walk around outside and inside the buildings. You may find emission points besides the roof stacks, such as wall vents or exhaust fans. Also look for operations that exhaust into the building. You must include equipment that exhausts into the building in the emission calculations. After this survey, you should have identified all of the emission points. List and describe each emission point in *Part C,* and in the emission unit segment *Part D,* or the batch process segment *Part E* of the Operating Permit application.

Also note if there is pollution control equipment at any emission point. If there is monitoring equipment for the control equipment at the emission point, describe it.

Monitoring equipment examples are temperature gauges, pressure gauges and flow meters. Use the compliance plan forms (*Part F*) to describe your monitoring and control equipment.

Using your survey notes of outside and inside emission points, place all of the emission points on a facility or section layout diagram. This information is helpful as you complete the Operating Permit application forms. The application must include information describing the location of your emission points. A facility emission point diagram should be included with your Emission Point Inventory.

IMPORTANT NOTE: Although some of the operations do not have stacks or vents, their process emissions exhaust into the atmosphere through building ventilation or escape through doors and windows. You must include these types of emissions in your calculations. Operations that do not have a specific stack or vent are still considered emission units. Do not confuse this type of emission with "fugitive" emissions. Later sections in this Guide provide more information on fugitive emissions.

4.2 Methods to Present Data

There are two methods available to present data for equipment subject to the Operating Permit program: emission unit and batch process. Although an emission unit may consist of one or more pieces of equipment, we only allow establishing an emission unit with more than one piece of equipment if the exhaust (or sometimes the manufacturing operation) so physically connects or intertwines that permitting each piece of equipment is not practicable. The emission unit permitting method describes an operating scenario as a unit operation.

A batch process consists of multiple pieces of equipment, control devices, and emission points. The equipment and emission points need not be hard-piped together to be permitted as a batch process. However, the manufacturing operations must relate so closely that you need to describe all the unit operations of all sources necessary to produce a product collectively to clearly understand the operating scenarios. A typical batch process may interchange pieces of equipment and emission points to manufacture a variety of products. Recordkeeping is easier for these types of manufacturing operations if the batch process permitting method is chosen. The batch process permitting method describes an operating scenario as a process consisting of several unit operations.

4.2.1 Operating Scenarios

An operating scenario, for purposes of an Operating Permit, is a description of a particular manufacturing operation or process. The description identifies the relationship of a piece of equipment, control device(s), and an emission point(s). **You may describe only one piece of equipment in an operating scenario.** The description should include information about the performance of the control device(s) and identify all air contaminants. You may have more than one operating scenario for a piece of equipment. For example, a boiler using natural gas and fuel oil has two different operating scenarios. One while burning natural gas, and another while burning fuel oil. *Parts D* and *E* of the Operating Permit application forms provide the format for presenting "air" data including operating scenarios.

4.2.2 Emission Unit

Emission units usually describe a single piece of equipment (such as a paint booth, a chemical reactor, or a printing press). You can describe two or more pieces of equipment as an emission unit if they share a common exhaust and are physically connected in such a manner that presenting data is made easier if presented collectively. You must record control devices in series. If control equipment connects in parallel, you cannot list it in an emission unit. For this situation, you should call the NJDEP for guidance.

For example, a manufacturing operation may include a conveying system that transports a product through several unit operations (i.e., sandblasting, cleaning, painting, etc.). The operation may individually vent and control the various operations, or they may share a common venting system. In either case, each unit operation is analogous to an operating scenario.

You should describe the various operating scenarios (unit operations) associated with a manufacturing operation using a common conveying system as one emission unit in *Part D* along with a description of the emissions from each operating scenario individually (as if all other operating scenarios are not in operation).

Another example involves two or more pieces of equipment that share a common venting system. This is common among boiler configurations. In this type of arrangement, each unit operation of each boiler is considered one operating scenario. For example, for a boiler that can burn either coal or oil, the application should describe two operating scenarios: one for coal burning and one for oil burning.

4.2.3 Batch Processes

A batch process operation is a noncontinuous process where you charge and process raw materials and produce a product intermittently. In a batch process operation, charging raw materials and withdrawal of products normally do not occur simultaneously.

In the chemical and pharmaceutical manufacturing industries, operating and keeping records about a particular manufactured product is common. One manufacturing process may use one piece of equipment in several unit operations (filling, reacting, etc.) besides using other pieces of equipment. The equipment may or may not use a common venting system. This operational approach may use many pieces of equipment, control devices, and emission points (in various configurations) to produce many products. This type of manufacturing is a batch process.

A batch process operating scenario describes a process line involving several unit operations that several pieces of equipment perform in manufacturing a particular product (or family of products). You should describe the total emissions from the entire batch process of a particular product. In addition, give the emissions of the criteria pollutants for each step of the batch process.

The batch process permitting method requires the applicant to submit an inventory of equipment, control devices, and emission points; and to submit separate operating scenario descriptions (showing the relationship of the equipment, control devices, and emission points in operation, during the processing of each batch or product).

The primary benefit of batch process permitting (as opposed to emission unit permitting) is the method by which records are kept. In batch plant recordkeeping, the applicant merely records the batch being manufactured, which indicates the pre-approved calculated emissions from a variety of unit operations.

Batch process applicants may choose to permit their batch plant equipment using the emission unit method, but they undoubtedly enhance flexibility (requires fewer permit revisions) with the batch process method.

4.2.4 Not All Operating Scenarios Have to Be Described

To describe each existing operating scenario is not practical nor meaningful. At a minimum, you should describe the worst case operating scenario. However, because operating scenarios are unique, the worst case is subject to personal judgement and is not always easy to identify. Therefore, in some applications, you need to describe more than one operating scenario.

To reduce the operating scenario descriptions and to provide maximum flexibility in permitting, you may describe an operating scenario as a family of similar unit operations that are subject to the same applicability requirements or as an operational range. For example, instead of describing a particular type of inking operation, you may describe a family of unit operations as inking. You may then identify and describe the worst case of the inking operations. You need not describe the remaining inking operating scenarios.

Other operations that you may describe as a family of unit operations include: painting, dying, sandblasting, mixing, coating, etc. However, a family of unit operations may not include unit operations that are dissimilar, such as inking and painting.

There are many advantages of describing the unit operations in a flexible manner. The Department spends fewer hours reviewing a more flexible single description than reviewing several operating scenarios. It also allows the applicant to operate within a family of unit operations described in one operating scenario, eliminating the need for permit modifications for each change.

This flexible means of describing an operating scenario may be used in both emission unit and batch plant permitting.

4.2.5 Equipment May Not Be Described in More than One Emission Unit

The application can only describe a piece of equipment in only one emission unit. If you describe a piece of equipment in an emission unit, you may not describe it in another emission unit or in a batch process. However, you may describe control devices and emission points by more than one emission unit. A piece of equipment having multiple operational modes within one emission unit can be described by adding additional operating scenario descriptions.

You may describe equipment permitted in a batch process in more than one batch process. You may describe control devices and emission points in one or more batch processes; and in one or more emission units.

4.3 Fugitives, Insignificant Sources and Exempt Activities

Air emissions that are not intended to exhaust through an emission point are non-source fugitive emissions. Examples of non-source fugitive emissions include dust blowing from rock or coal piles. Volatile organic compound emissions, from leaking valves or flanges, are also fugitive emissions. Printing emissions at a print shop, on the other hand, are not non-source fugitive emissions, because you could collect and emit them from an emission point.

Summarize any sources of non-source fugitive emissions in *Part B* and develop the compliance plan in *Part F* of the *Operating Permit Application* forms.

After surveying the facility, you should have found all of the emission points and units. You don't have to include every activity in your application. N.J.A.C. 7:27-22.1 provides a list and description of the exempt activities or sources you may exclude from an application. Exempt activities include fuel combustion for food preparation (e.g., an employee cafeteria), maintenance activities, and clerical activities.

There is also a second group of sources that you must include in your application. These are insignificant sources. N.J.A.C. 7:27-22.1 identifies the insignificant sources that you must describe.

4.4 Start Up, Shut Down, or Scheduled Equipment Maintenance Emission Limits

Equipment at the facility may exceed its allowable Potential to Emit during periods of normal start-up, normal shutdown, or scheduled equipment maintenance. For the pieces of equipment in this category, complete *Section 63, Operating Scenario Description* to ensure that you have the authority to exceed your allowable emissions and that you can adjust your Potential to Emit, if necessary. The limits that you propose for these periods of operation may not conflict with the SIP or any state or federal regulation.

4.5 Describing Your Operations

The Operating Permit application should describe how the raw materials, processes, products, and emissions relate. Diagrams are useful tools for describing operations and their relationships in a clear and efficient way. A process flow diagram can be used for this purpose.

Think of the operations as a whole and work toward more detailed descriptions and process flow diagrams. Start with a rough sketch of your overall operations. Show the raw materials used, the process steps, and the finished products. After you have sketched the overall operations, do the same for specific processes. You should include all emission points identified on the walk-through of your facility on these process flow diagrams. The next step involves deciding what equipment you describe as part of an emission unit or part of a batch process.

5.0 Potential to Emit

Now that you have a list of all your equipment, emission units, and batch processes; you are ready to look at your air emissions. The Potential to Emit (PTE) from your facility is one of the most important parts of your permit application. Primarily, it helps you determine what Rules and Regulations apply to your facility. For most facilities, PTE is the basis for deciding whether you need an Operating Permit.

Potential to Emit is the maximum amount of air emissions a unit or facility can possibly produce in a year within the limits of the permit. PTE gives the NJDEP a uniform way to assess all types of facilities. Following is the definition of PTE in N.J.A.C. 7:27-22.1:

"Potential to Emit" means the same as that term is defined by the EPA at 40 CFR 70.2 or any subsequent amendments thereto. In general, the potential to emit is the maximum aggregate capacity of a source operation or of a facility to emit an air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of a source operation or a facility to emit an air contaminant, including any limitation on fugitive emissions as a result of any applicable requirement, control apparatus, and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design, if the limitation is Federally enforceable. Unless otherwise indicated, fugitive emissions shall be included in the determination of Potential to Emit. However, the determination shall not include any banked emission reductions that are held by the owner or operator.

5.1 How to Calculate Potential to Emit

To calculate PTE, use the following criteria:

- The emission unit operates continuously. This means that it runs 24 hours per day, 365 days per year. This amounts to 8,760 hours per year.

- The emission unit operates at its physical and operational design capacity. This means the absolute maximum performance that the emission unit or source can achieve.

- The material with the most emissions is processed or used 100% of the time (e.g., for volatile organic compound calculations, you should assume the coating with the highest solvent content is used 100% of the time; for particulate matter calculations, assume the coating with the highest solid content is used 100% of the time).

- The use of any air pollution control apparatus if it is included in a federally enforceable permit.

The previous criteria results in an unrestricted PTE. You may have, or propose in your application (*Section 25, Intra Facility Emission Trading*), a restricted or "allowable" PTE. An example of such a permit condition is one limiting the number of hours your emission unit can operate. You would use the number of hours in your permit to calculate a restricted PTE for that emission unit or batch process. You would also use the control equipment's efficiency, if it is included in a federally enforceable permit, to calculate PTE. The amount of your restrictions reduces your unrestricted PTE. This limit is your emission unit or batch process PTE. You should record the PTE for an emission unit on *Part D* and for a batch process you should record the PTE on *Part E.*

5.1.1 References to Use to Calculate Potential to Emit

The PTE is calculated separately for each regulated air contaminant from each emission unit or batch process. If the facility has a preconstruction permit, then the PTE is equal to the allowable emissions permitted under the Subchapter 8 preconstruction permit conditions; if the facility does not have a preconstruction permit for the emission source, the PTE is equal to the applicable requirement limit; if the facility does not have either of the above, PTE is calculated with the maximum production rate using 8760 hours of operation per year (worst case conditions).

Show the work for your PTE calculations. Part of the NJDEP's review of your application includes checking how you determined your PTE. If you use a computer spreadsheet, include a sample calculation or the formulas used with the application.

Table 5-1 gives methods for calculating emissions. *Appendix A* lists reference documents that might help you. Remember, exempt activities listed in N.J.A.C. 7:27-22.1 et seq. do not need emission calculations (unless the additional emissions subject your facility to different requirements). Operating Permits will contain data and information that are presently in any existing Permit to Construct and Certificate to Operate issued by the NJDEP to facilities subject to the Operating Permits program (Part 70 sources). After we issue an Operating Permit to a facility, the Operating Permit replaces and incorporates any existing Permit to Construct and Certificates to Operate.

Table 5-1
Methods for Calculating Emissions

Emission Factors	Mass Balances	Performance Test	New Jersey Rules	Federal NSPS
Emission factors exist for many types of emission units and processes. An emission factor is an average emission value from industry data. It relates an activity or process to the quantity of a contaminant released into the atmosphere. Factors are usually expressed as the weight of contaminant released per volume or weight of the activity. You may need to know your process capacity or design rating to use an emission factor. An example of an emission factor is "A0.0124 pound of NO_X per gallon of propane burned." Emission factors for contaminants are found in EPA publications such as *AIRS*. If you need more information, *AP-42*, the *Factor Information and Retrieval* (*FIRE*) database, and *Toxic Air Pollutant Emission Factors* may also be useful. These documents contain emission factors for many source classification codes (see *Appendix-H* for more information on SCCs). They intend these factors for use as default values if a facility lacks other emission data. Ordering information is in *Appendix A*. If you have data specific to your operations (e.g., from stack testing), use that instead of an emission factor.	Mass balance relies on the idea that "what goes in, must come out." Materials entering some process equal materials leaving, either through the product, recycled material, air emissions, wastewater, solid waste, or hazardous waste. To find the amount of air emissions, you must accurately define these quantities: the amount of raw materials fed to production, the amount used in the product, and the amount lost to the non-air waste stream. Analyzing purchasing records, production records, product specifications, and hazardous waste records may be helpful.	You can use data from a performance test or a continuous emissions monitor (CEM) for a facility instead of emission factors. If you use actual operating or test data (your own or from a similar source), they should have been taken at the maximum emission rate. The test data must correlate to the routine operating conditions for the unit.	Physical PTE cannot exceed the limits listed in the New Jersey Rules (primarily N.J.A.C. 7:27-1.1 et seq.). You can use the Rule values to calculate your "allowable" emissions from an emission unit. If the PTE is greater than the allowable emissions under the Rule, the allowable emissions are used as your PTE. The Rules do not let you emit more than the allowable amount. If the emissions cannot meet the State Rule limit, you have to add control equipment or modify operations so that you meet limit. If you have no other source of emissions data to calculate the physical PTE for an emission unit, you can use the allowable emissions as the PTE for that unit.	You cannot exceed applicable New Source Performance Standards. These emission limits are used to calculate "allowable" emissions. The limits' allowable emissions are then used as the PTE for the emission unit.

5.1.2 The Next Step After Calculating the Emissions

After you have found the Potential to Emit (PTE) from each individual emission unit, batch process, non-source trading groups, and insignificant sources; find the total PTE for each contaminant emitted by your facility. To obtain the total PTE for each contaminant, add the PTE from all the individual emission categories. Once you have the total facility PTE for each contaminant, compare each of your totals to the thresholds for permits.

Section 5.1.5 lists all the emission thresholds. If your total facility PTE for any contaminant (or groups of pollutants, such as HAPs) is above the threshold level, an Operating Permit is required.

5.1.3 Fugitive Emissions

If you have fugitive emissions, the PTE calculation for the facility must include their emissions for certain circumstances. You should consult the Amajor source@ definition in N.J.A.C. 7:27-22.1. The facility PTE, including fugitive emissions, may trigger the need for an Operating Permit for your facility.

5.1.4 If Your Potential to Emit is Below the Threshold

If the potential emissions are below all the thresholds listed in *Section 5.1.5 Applicability Work Sheets,* you may not have to submit an Operating Permit application, but may apply for a Negative Declaration (*Appendix F*). You should keep records showing your calculations and decisions. Also, keep track of any increases in emissions in case the facility PTE ever exceeds a threshold. If it does, you must obtain an Operating Permit.

5.1.5 Applicability Worksheets

You may want to determine if a facility is subject to the Operating Permit Regulation, N.J.A.C. 7:27-22. This series of applicability worksheets enable you to make this decision.

- If you determine that your facility is a major facility, continue with the instructions and complete the Operating Permit application.

- If you determine you are not subject to the Operating Permit regulation and want confirmation, you may apply for a Negative Declaration (*Appendix F*).

5.1.5.1 Does Your Facility Emit or Have the Potential to Emit as Defined in N.J.A.C. 7:27-22.1, in the Aggregate, Any Air Contaminant in an Amount Which Equals or Exceeds the Following Applicability Levels?

Air Contaminant[1]	Applicability Level (tons/year)	Check One or More	
		Yes	No
VOC	25	_	_
NO_X	25	_	_
CO	100	_	_
PM_{10}	100	_	_
TSP	100	_	_
SO_2	100	_	_
Lead	10	_	_
Any Hazardous Air Pollutant (HAP)	10	_	_
Any Combination of HAPs	25	_	_
Any other Air Contaminant	100	_	_

- If you answered "Yes" to any of the above, your facility is subject to N.J.A.C. 7:27-22. Go on to *Section 5.1.5.4*.
- If you answered "No" to all of the above, go to *Section 5.1.5.2.*

[1]Fugitive emissions must be included in the calculation of a facility's potential to emit for certain source categories as defined in N.J.A.C. 7:27-22.2(a) 1 and 2.

5.1.5.2 Does Your Facility Emit or Have the Potential to Emit, Any Air Contaminant in the Amount that Exceeds the Limit in the Table Referenced Below; or Is Your Facility or Any Part of Your Facility Subject to the Following?

Applicability Requirement	Reference	Check One or More	
		Yes	No
a) Lesser quantity of HAP	42 U.S.C. '7412(a)(1)	__	__
b) Acid Rain Facility	Affected Title IV[1]	__	__
c) Designated Source	40 CFR 70.3(a)(5)[2]	__	__
d) Municipal Solid Waste Incinerator>250 tons capacity burned/day	40 CFR 70.3 (b)(1)	__	__
e) Election	Facility Choice	__	__

- If you answered "Yes" to either a, b, d, or e above, your facility is a major facility. Go on to *Section 5.1.5.4.*
- If you answered "Yes" to only c above, go to *Section 5.1.5.3.*
- If you answered "No" to all of the above in *Section 5.1.5.2*, go to *Section 5.1.5.3.*

[1] As defined at N.J.A.C. 7:27-22.1.

[2] The Federal government authorizes the EPA to designate source categories as subject to Operating Permit requirements pursuant to 40 CFR 70.3(a)(5).

5.1.5.3 Do the Following Applicable Requirements Apply to Your Facility?

Applicability Requirement	Reference	Check One or More	
		Yes	No
NSPS for New Residential Wood Heaters	40 CFR 60 Subpart AAA	__	__
National Emission Standard for HAPs for Asbestos (Demolition / Renovation)	40 CFR 61 Subpart M Section 61.145	__	__
Prevention of Accidental Releases	42 U.S.C. '7412(r)	__	__

- If the answer to any one of the above three questions is “Yes”, and this is the only applicable requirement which applies to your facility; you are not subject to N.J.A.C. 7:27-22 (Operating Permits) and may apply for a Negative Declaration (*Appendix F*).

5.1.5.4 Does Your Facility Conduct Research and Development Operations?

For the purposes of determining applicability, an owner or operator may elect to treat any part(s) of a facility, used solely for research and development (R&D) operations, as a separate facility in cases where the R&D facility differs from the rest of the facility and is not a support facility.

If you treat any R&D operations of a facility separately for the purposes of normal applicability levels in *Section 5.1.5.1* above, you may consider the emissions (or the Potential to Emit) of those operations separately from those of the remainder of the facility.

Applicability	Yes	No
Do you have R&D operations at your facility?	__	__

- If “Yes”, continue to next question.

Applicability	Yes	No
Do you wish to treat the R&D operations at your facility separately?	_	_

- If "Yes", do your R&D operations emit or have the Potential to Emit (including fugitives) in the aggregate, any air contaminant, in an amount which equals or exceeds the following applicability levels?

Air Contaminant	R & D Applicability Level (tons/year)	Check One	
		Yes	No
VOC	25	_	_
NO_X	25	_	_
CO	100	_	_
PM_{10}	100	_	_
TSP	100	_	_
SO_2	100	_	_
Any HAP	10	_	_
Any Combination of HAPs	25	_	_
Any Other Contaminant	100	_	_
Lesser Quantity of HAP	42 U.S.C. '7412(a)(1)	_	_

- If you answered "Yes" to any of the above in the applicability section for R&D, your R&D facility is a major facility and is subject to the Operating Permit regulation. You must complete all relevant parts of the Operating Permit application.

END OF APPLICABILITY WORKSHEETS

5.2 Limit Your Potential to Emit

5.2.1 You Can Avoid Being Subject to Federal Regulations

Suppose your Potential to Emit exceeds a threshold for a Part 70 permit for either criteria or hazardous air pollutants. However, your actual emissions are below the thresholds. You can then choose to limit your potential emissions by obtaining preconstruction permits for the equipment in question at lower potential emissions levels.

These preconstruction permits contain operating and emission limits. By accepting preconstruction permit conditions that limit what you are allowed to emit, you redefine the PTE. The allowable emissions in preconstruction permits become the PTE. Facilities that lower their potential to emit through this process to obtain a minor facility status are called synthetic minor facilities.

A synthetic minor facility has benefits. For example, suppose you receive approval as a synthetic minor facility instead of a Part 70 facility. You then may be exempt from enhanced monitoring requirements. A synthetic minor facility has other advantages. The facility is subject to preconstruction permits and certificates of operation without Federal oversight of your permit. There is no public review process. Non-source fugitives are not reportable. A synthetic minor facility is not subject to operating permit emission fees and application fees. You can save both time and money with a simpler application process. Remember, if you receive approval as a synthetic minor facility, you must perform sufficient recordkeeping and monitoring to show you are meeting the preconstruction permit limits.

The following discusses what to include in your proposal to become a synthetic minor facility.

5.2.2 Acceptable Options for Synthetic Minor Limits

Acceptable preconstruction permit conditions for a synthetic minor facility set specific limits for specific contaminants. You cannot write your preconstruction permit as, "do not exceed 99 tons per year of CO" - this is too vague to enforce. A permit limit for a synthetic minor must be enforceable. Enforceability means the limit is enforceable in a practical way.

Practically enforceable limits may be:

- Production limits - restrictions on the amount of a final product that is manufactured or produced at a facility or process line (per hour, day, or year).

- Operational limits - restrictions on how to operate a source. These include limits on the hours of operation, fuel use, raw material type and usage, and the operation of pollution control equipment.

- Emission limits - these are acceptable if they are quantifiable. Examples are pounds of contaminant per million Btu heat input or pounds of contaminant per unit of product. Emission limits are often linked to operational limits (e.g., a limit on the amount of fuel burned).

You must show compliance with all the limits or requirements at any time. To show this, you may employ some of the following methods:

- Recordkeeping such as production throughput and hours of operation

- Continuous emission monitoring (CEM) data

- Stack test data

- Material analysis such as Material Safety Data Sheets (MSDSs), supplier certification, or fuel analysis results.

If you choose to limit the hours of operation, PTE is calculated using the maximum design capacity, for all the hours, allowed by the permit. A limit on the hours of operation is more restrictive than other operating limits. You can use a combination of types of limits, such as hours of operation with material usage.

For many sources, you may propose the period associated with production in any of several ways as long as it is consistent with the applicable requirement: a straight monthly limit (i.e., not to exceed 500 hours per month), an annual limit where you calculate the total over the previous 12 months (called a 12-month rolling sum), or one where you calculate the month average over the previous 12 months (called 12-month rolling average). Either of the rolling limits gives you a bit more operating flexibility than a monthly limit. Low months allow you to have high months and still not exceed your limit.

IMPORTANT NOTE: Make sure you can "live with" the limits in your preconstruction permits for a synthetic minor facility. Suppose that you want to modify your permit and would exceed the synthetic minor facility limits. Then you will have to address the requirements you avoided when you became a synthetic minor facility.

If you do not comply with the preconstruction permit limits, you are subject to enforcement action. The objective of a synthetic minor facility is to simplify the permit

process for facilities whose actual emissions are minor; not for sources to avoid major source requirements, if those requirements apply to them.

6.0 Rules and Regulations

Some Federal and State Air Quality Rules and Regulations apply to specific emission units and batch processes. Some apply to the entire facility. This section is a brief introduction to what the NJDEP and EPA call "applicable requirements." *Part F - Compliance Plan* helps you define all the Rules and Regulations that apply to you in the Operating Permit application. Refer to *Part II* of the *Guidance Document* and the Rules and Regulations that relate to completing the compliance plan portion of your application.

Federal Regulations are found in the Code of Federal Regulations (CFR). Title 40 of the CFR covers the protection of the environment. Air Quality Regulations are in Parts 50 to 99 of Title 40. If you see a reference to 40 CFR 61.01, it means the Code of Federal Regulations, Title 40, Part 61, Section 01. Copies of Federal and State Regulations are at state and county law libraries, university or college libraries, and some public libraries. You can also order copies of the New Jersey Rules by contacting New Source Review at (609) 633-2829. Some of the New Jersey Rules are available in the Air Quality Permit Program (AQPP) Bulletin Board System (BBS) as referenced in *Section 10.1* of this Guidance Document. See *Appendix A* in the *Operating Permit Application Package* for a list of the Rule publications and where to order them.

6.1 Federal Regulations

Whether your facility needs a permit or not, you must comply with the Federal Regulations.

6.1.1 National Ambient Air Quality Standards

The National Ambient Air Quality Standards (NAAQS) set the maximum concentrations of contaminants allowed in the ambient air. The air contaminants for which EPA promulgates the standards are the criteria pollutants (Particulate Matter less than 10 microns (PM_{10}), Sulfur Dioxide (SO_2), Nitrogen Dioxide (NO_2), Carbon Monoxide (CO), Lead (Pb), and Ozone (O_3)). Primary standards are set to protect public health, while secondary standards protect public welfare. Public welfare includes economic and environmental effects such as damage to plants or buildings. The NAAQS are found in Part 50 of the Code of Federal Regulations.

If an area (e.g., a county) meets the National Ambient Air Quality Standards, then the area is called an attainment area. A non-attainment area is where the level of a criteria pollutant in the air exceeds the NAAQS for that contaminant. Location of the facility affects your status for New Source Review (see *Section 6.1.4* of this Guidance Document).

6.1.2 National Emission Standards for Hazardous Air Pollutants

Title III of the 1990 Clean Air Act Amendments expanded the number of air contaminants and emission source categories regulated under the National Emission Standards for Hazardous Air Pollutants (NESHAPs) program. 40 CFR 61 has standards for nine hazardous air contaminants when emitted from specific source types. The eight hazardous air contaminants are radon, beryllium, mercury, vinyl chloride, radionuclides, benzene, asbestos, and inorganic arsenic. The regulations covering the additional HAPs are found in 40 CFR 63, NESHAPs for source categories and 40 CFR 68, Risk Management for Chemical Accidental Release Prevention.

Appendix G contains the group of hazardous air pollutants from Title III of the CAA (see *Table A* and *Table B* in *Appendix G* of the *Operating Permit Application Package*). Some of the 188 hazardous air pollutants overlap with the eight listed in Part 61. These 188 chemicals include components of common solvents and heavy metals like cadmium. For sources that emit these hazardous air pollutants, the EPA is developing Maximum Achievable Control Technology (MACT) standards. They are developing MACT standards for new major sources and for existing major sources of hazardous air pollutants. The standards apply to source categories such as iron foundries or wood treatment. A facility may be subject to a MACT standard but not required to have a Federal Operating Permit, if the EPA chooses to waive the requirements for certain small sources.

MACT standards are established based on current technology. A MACT standard can be an emission rate, a product substitution, a work practice, or a control technology requirement. When setting the standards, the EPA considers factors such as cost, energy use, waste disposal, and water quality. Once a MACT standard is in effect, an existing source has up to three years to comply. If your facility has opted to participate in the Federal Early Reductions Program, you may have up to six years to comply with MACT. A new source must comply with MACT upon startup. Please note that if a MACT standard is promulgated that applies to your facility, you must comply with it regardless of your permit status.

6.1.3 Prevention of Accidental Release

Title 40, Part 68 of the Code of Federal Regulations concerns the prevention of accidental releases. It applies to specific chemicals, but only if a facility uses, handles, processes, or stores more than a threshold amount of the chemical. However, these requirements are not permit requirements. If this part of the regulation applies, the facility will be required to develop and submit a risk management plan for the

prevention of accidental releases that covers hazard assessment, pollution prevention, and emergency response issues for your facility.

6.1.4 Federal Major New Source Review Program

Major New Source Review (NSR) regulations are Federal Regulations that New Jersey administers through its preconstruction permits. NSR Regulations are in Part 51, Appendix S and Section 52.21 of Title 40 of the Code of Federal Regulations. The present NSR Regulations have been in effect since 1980. The goal of NSR is to allow economic growth while protecting air quality.

The Federal NSR program regulates these air contaminants:

- Carbon Monoxide (CO)
- Ozone (Volatile Organic Compounds (VOCs))
- Sulfur Dioxide (SO_2)
- Sulfuric Acid Mist
- PM_{10} and Total Suspended Particulate (TSP)
- Total Reduced Sulfur (TRS) Compounds
- Oxides of Nitrogen (NO_X)
- Municipal Waste Combustor Acid Gases and Metals
- Lead (Pb)
- Fluorides

Within NSR, two related programs are based on your location. One is Prevention of Significant Deterioration (PSD), which applies to facilities in attainment areas. The other program is Non-attainment Area New Source Review for areas that exceed one or more of the National Ambient Air Quality Standards (NAAQS). Many similarities exist between PSD and Non-attainment Area review.

The PSD program also provides special protection to geographic areas with special scenic or recreational values. The Clean Air Act references these locations as "Class I" areas. In New Jersey there is one Class I area in the Brigantine Division of the Edwin B. Forsythe National Wildlife Refuge north of Atlantic City, New Jersey.

6.1.4.1 Does the New Source Review Apply to Your Facility?

Your facility could be a "major" source and require a Part 70 permit. That does not necessarily mean your facility is a major source for NSR. The NSR applies to new or modified facilities whose emissions meet or exceed the thresholds in the NSR Regulations. The major source threshold for NSR is a PTE 100 tons per year if either of these criteria applies:

- You trigger “PSD” review if your facility is one of the 28 types listed in *Table 6-1* and the facility’s potential to emit any air contaminant exceed 100 tons per year. The number in parentheses are the typical SIC codes for the source type. (Note: For these 28 sources, count fugitive emissions in your potential to emit to determine if your facility is “major”). If your facility is not one of the 28 types listed, then the PSD threshold for facilities defined as a “major” source is 250 tons per year.

- You trigger “Nonattainment Area” review only if your facility’s potential to emit the following air contaminants exceed the “major facility” threshold listed below:

Criteria Pollutant	Major Facility Threshold
CO	100 tpy
SO_2	100 tpy
TSP	100 tpy
PM_{10}	100 tpy
VOC	25 tpy
NO_X	25 tpy
Pb	10 tpy

If neither of these criteria applies to you, then the threshold for facilities defined as a "major" source is 250 tons per year.

Table 6-1
Sources That Are Major for NSR if PTE Exceeds 100 Tons per Year
Reference: 40 CFR 52.21, PSD Regulations

- Sintering Plants[1]
- Nitric Acid Plants (2873)
- Sulfuric Acid Plants (2819)
- Coke Oven Batteries (3312)
- Glass Fiber Processing Plants
- Portland Cement Plants (3241)
- Primary Lead Smelters (3339)
- Chemical Process Plants (28xx)
- Taconite Ore Processing Plants (1011)
- Charcoal Production Plants (2819, 2861)
- Coal Cleaning Plants with Thermal Dryers
- Primary Aluminum Ore Reduction Plants (3334)
- Fossil Fuel-Fired Steam Electric Plants of More Than 250 MMBtu/hr
- Fossil-Fuel Boilers (or combination thereof) totaling more than 250 MMBtu/hr
- Fuel Conversion Plants
- Lime Plants (3274, 1422)
- Iron and Steel Mills (332x)
- Petroleum Refineries (2911)
- Kraft Pulp Mills (2611, 2621)
- Primary Zinc Smelters (3339)
- Sulfur Recovery Plants (2819)
- Primary Copper Smelters (3331)
- Hydrofluoric Acid Plants (2819, 2899)
- Phosphate Rock Processing Plants (1475)
- Carbon Black Plants (Furnace Process, 2895)
- Secondary Metal Production Plants (332x, 334x, 336x)
- Petroleum Storage and Transfer Units, Storage Capacity over 300,000 Barrels
- Municipal Incinerators Capable of Charging More Than 250 Tons of Refuse/Day

Note: Numbers in parentheses are typical SIC codes for the source type.

[1]Processing of fine grain materials into coarser lumps (performed primarily on ores).

6.1.4.2 What is Required for a "Major" New Source Review?

If you have to perform a major New Source Review for a source for your project, include these items:

- Analysis for each contaminant to show whether PSD or non-attainment review applies
- Analysis of the proposed emission rate or control technology
- Ambient air monitoring (for some facilities)
- Computer dispersion modeling to analyze impacts on air quality, visibility, soils and vegetation.

"Major" NSR requires you to minimize your emissions. In a non-attainment area review, you must have the Lowest Achievable Emission Rate (LAER). LAER does not account for things like cost. It is strictly a technical determination of the lowest emission rate for your emission unit. For Prevention of Significant Deterioration (PSD) reviews in attainment areas, you must apply the Best Available Control Technology (BACT). BACT is not necessarily a type of pollution control equipment, though the name implies it. A BACT study gives an emission rate. If you can achieve the emission rate with good process control, then good process control is BACT.

You may have the option of classifying your facility as a synthetic minor facility restricting emissions to less than threshold levels for "major" NSR. If you do, the requirements are avoided. You may take permit conditions to restrict emissions from a new facility to less than 100 tons per year or 250 tons per year. If your existing facility always had actual emissions below "major" NSR thresholds, then you may be able to receive a synthetic minor facility approval.

6.1.5 New Source Performance Standards

Section 111 of the *Clean Air Act*, "Standards of Performance for New Stationary Sources", required the EPA to establish federal emission standards for stationary source categories that cause or contribute significantly to air pollution. Regulated contaminants emitted by identified source categories and their respective emission limits vary for each New Source Performance Standard (NSPS) promulgated. The regulated air contaminants include particulate matter, sulfur dioxide, carbon monoxide, nitrogen oxides, volatile organic compounds, acid mist, total reduced sulfur (TRS), and fluorides. The regulated sources can be found in 40 CFR 60.

New Source Performance Standards exist so that so that new emission sources will emit less pollution than old sources. Each NSPS includes emission limits, monitoring, reporting and recordkeeping requirements. These standards may affect facilities that construct, modify or reconstruct any specific emission source or unit.

Facilities must also comply with the General Provisions of the NSPS program. These provisions include notification and testing, in addition to monitoring, reporting and recordkeeping procedures for each specific source. To determine which NSPS General Provisions apply to your facility, refer to 40 CFR, Subpart A (Sections 60.1 through 60.18).

When looking at NSPS, modification has a specific meaning. Modification is a physical or operational change, to your facility, that results in an increased emission rate of a regulated air contaminant. Routine maintenance and repair are not considered modifications. Reconstruction may be a modification and is defined for NSPS. Reconstruction is the significant replacement of existing components to an emission source (i.e., the cost of repair is greater than 50 percent of the cost of replacing the entire emission source).

6.1.6 Title IV Acid Rain

The acid rain program as referred to in Title IV of the Clean Air Act Amendments of 1990 generally applies to power utilities with a generating capacity of more than 25 megawatts. It may apply to your facility if you combust fossil fuel and generate electricity for wholesale or retail sale. The acid rain program requirements are in Parts 72, 73, 75, 77, and 78 of Title 40 of the Code of Federal Regulations.

The acid rain provisions require improvements in the removal of sulfur dioxide and oxides of nitrogen by utility sources at or prior to the year 2000. The 1980 baseline level for each air contaminant was approximately 20 million tons per year. Sulfur dioxide levels will decrease roughly 50 percent or better and oxides of nitrogen will decrease approximately ten percent from 1980 levels as a result of the acid rain program. This required reduction will affect utility power plants and very large boilers as indicated in 40 CFR 72.6.

Compliance plans will indicate how a facility will operate according to the provisions in the acid rain program. Refer to 40 CFR 75 for more information on monitoring, recordkeeping and reporting requirements of the acid rain program. Similar monitoring or reporting requirements associated with other regulations may apply to your facility. Even if you meet a Federal acid rain requirement, do not assume you have indirectly satisfied other regulatory requirements. For example, both the acid rain regulations and a New Source Performance Standard may require the installation of a continuous emission monitor to track sulfur dioxide emissions. The compliance plan must show compliance with both sets of continuous emission monitoring requirements.

Clearly mark the portions of the compliance plan to satisfy Federal acid rain requirements. This is important because the acid rain permit is a distinct portion of the Operating Permit.

6.1.7 Title VI Stratospheric Ozone Protection

Sections 606 through 612 of Title VI of the Clean Air Act Amendments of 1990 protect the stratospheric ozone layer. Section 606 requires phasing out use of certain ozone-depleting substances. Sections 608 and 609 specify proper procedures for maintaining and repairing appliances, heating, ventilation, and air conditioning (HVAC) systems, or motor vehicles containing ozone depleting materials.

Because certain chemicals cause a depletion of the ozone layer, Title VI phased out their production. Most of the ozone depleting chemicals are chlorofluorocarbons (called Freon8 or CFCs). The December 10, 1993 Federal Register, pages 65080-65082, Appendix F to Subpart A lists ozone depleting chemicals. Other affected compounds include 1,1,1-trichloroethane and carbon tetrachloride.

If your facility manufactures, sells, distributes, or uses any of these chemicals, this Rule may apply to you. If so, you need to identify any replacement chemical(s) in your permit application. These regulations are in Part 82 of Title 40 of the Code of Federal Regulations. The Federal Environmental Protection Agency, Stratospheric Ozone Hotline, (800) 296-1996, is available Monday through Friday, 9:00 a.m. to 3:00 p.m. Central Standard Time.

If you replace an ozone depleting chemical with a VOC containing compound, you may need a preconstruction permit to authorize the change in your operations.

6.1.8 Enhanced Monitoring

Enhanced monitoring requirements apply to facilities that have or need a Part 70 permit (i.e., those with a PTE of 100 tons per year or greater). At the time of this writing, the final Rule for enhanced monitoring had not been published.

6.1.9 Federal Rules in Development

Rules for the following requirements are being developed:

- Municipal solid waste combustion,
- Federal ozone measures for the control of emissions from certain sources,
- Tank vessel standards for loading and unloading of marine vessels,
- MACT standards due in 1997 and 2000,
- Risk management plans, and
- Standards for landfills.

If your facility is subject to any of these requirements, you need to comply with the new Rules. You can track these regulations and others that are proposed in the Federal Register.

6.2 New Jersey Air Quality Rules

Whether your facility needs a permit or not, you have to comply with the State Rules. The following section lists the New Jersey Rules related to air emitting facilities.

6.2.1 Short Description of New Jersey Rules (N.J.A.C. 7:27 et.al.)

Following is a short description of Title 7, Chapter 27 of the New Jersey Administrative Code.

Subchapter 1: General Provisions

This rule sets standards for confidential information, the Department's right to enter facilities, and certification of information.

Subchapter 2: Control and Prohibition of Open Burning

This rule prohibits open burning with the exception of certain agricultural, forest fire management and emergency activities.

Subchapter 3: Control and Prohibition of Smoke from Combustion of Fuel

This rule prohibits visible smoke from the combustion of fuel.

Subchapter 4: Control and Prohibition of Particles from Combustion of Fuel

This rule sets standards for emissions of particulates from combustion of fuel.

Subchapter 5: Prohibition of Air Pollution

This rule prohibits odors.

Subchapter 6: Control and Prohibition of Particles from Manufacturing Processes

This rule sets standards for emissions of particulates from manufacturing processes.

Subchapter 7: Sulfur

This rule sets standards for emissions of sulfur compounds from other than fuel combustion.

Subchapter 8: Permits and Certificates

This rule sets out the requirements for air pollution control permits to construct and certificates to operate.

Subchapter 9: Sulfur in Fuels

This rule sets standards for the sulfur content of commercial fuel oil and standards for emissions of sulfur dioxide from combustion of fuel oil.

Subchapter 10: Sulfur in Solid Fuels

This rule sets standards for the sulfur content of solid fuels (mainly coal) and standards for emissions of sulfur dioxide from combustion of solid fuels.

Subchapter 11: Incinerators

This rule sets standards for emissions of particulates and smoke from incinerators.

Subchapter 12: Prevention and Control of Air Pollution Emergencies

This rule requires major industrial sources to file plans for reducing emissions during declared air pollution alerts, warnings or emergencies.

Subchapter 13: Ambient Air Quality Standards

This rule sets general ambient air quality standards for six specific air contaminants. Namely, suspended particulate matter, sulfur dioxide, carbon monoxide, ozone, lead and nitrogen dioxide.

Subchapter 14: Control and Prohibition of Air Pollution from Diesel-Powered Motor Vehicles

This rule sets standards of inspection for exhaust emissions from diesel-powered motor vehicles.

Subchapter 15: Control and Prohibition of Air Pollution from Light-Duty Gasoline-Fueled Motor Vehicles

This rule sets standards of inspection for exhaust from light-duty gasoline-fueled motor vehicles.

Subchapter 16: Control and Prohibition of Air Pollution by Volatile Organic Compounds

This rule sets standards for storage, transfer and emissions of volatile organic compounds (VOCs).

Subchapter 17: Control and Prohibition of Air Pollution by Toxic Substances

This rule sets standards for storage, transfer and emissions of eleven specific toxic volatile organic substances.

Subchapter 18: Control and Prohibition of Air Pollution from New or Altered Sources Affecting Ambient Air Quality (Emission Offset Rules)

This rule sets out the requirements for proposed new or modified sources located in or impacting on non-attainment areas.

Subchapter 19: Control and Prohibition of Air Pollution from Oxides of Nitrogen

This rule sets out the requirements for the implementation of reasonably available control technology (RACT) to control emissions of oxides of nitrogen (NO_X) from stationary sources.

Subchapter 20: (reserved)

Subchapter 21: Emission Statements

This rule sets out the requirements for owners or operators of facilities with emissions of criteria pollutants exceeding defined thresholds to report actual emissions annually to the Department.

Subchapter 22: Operating Permits

This rule sets out the requirements for comprehensive, facility wide operating permits for major air contaminant emitting facilities.

Subchapter 23: Prevention of Air Pollution from Architectural Coatings and Consumer Products

This rule sets standards for limiting the volatile organic compound (VOC) content of architectural coatings and consumer products.

Subchapter 24: (reserved)

Subchapter 25: Control and Prohibition of Air Pollution by Vehicular Fuels

This rule sets standards for the vapor pressure and oxygen content of gasoline.

Subchapter 26: (reserved)

Subchapter 27: Control and Prohibition of Mercury Emissions

This rule sets standards for limiting emissions of mercury from municipal solid waste incinerators.

6.2.2 Air Quality Permit Rules

The following list, defines new or altered equipment and control apparatus for which a preconstruction permit and an operating certificate are required. For the exact requirements, refer to the regulation.

New and altered equipment and control apparatus for which a permit and operation certificate are required, pursuant to the provisions of N.J.A.C. 7:27-8.2 include:

1. Any equipment used in a commercial or industrial paint spray operation, except for equipment used in architectural coating operations;

2. Equipment used in a manufacturing process involving a surface coating operation or graphic arts operation including, but not limited to spray and dip painting, roller coating, electrostatic depositing, surface striping or spray cleaning, from which direct or indirect emissions of air contaminants occur and in which the quantity of coating or cleaning material used in any source operation is equal to or greater than one half gallon in any one hour;

3. All unheated open top surface cleaners having a top opening of greater than six square feet (0.56 square meters);

4. All heated open top surface cleaners;

5. All conveyorized surface cleaners;

6. Equipment, in addition to that set forth in N.J.A.C. 7:27-8.2 (a)3, 4, and 5 used in a process involving surface cleaning or preparation including, but not limited to, degreasing, etching, pickling, or plating, from which direct or indirect emissions of any air contaminant occur from a tank or vessel, the capacity of which is in excess of 100 gallons;

7. Equipment, used in process, other than as set forth in N.J.A.C. 7:27-8.2 (a)2, 3, 4, 5, and 6 from which direct or indirect emissions of any air contaminant occur in which the combined weight of all raw materials, excluding air and water, introduced into any one source operation is in excess of 50 pounds in any one hour;

8. Stationary storage tanks which have a capacity in excess of 10,000 gallons and which are used for the storage of liquids, except water or distillates of air;

9. Stationary storage tanks which have a capacity of 2,000 gallons or greater and which are used for the storage of VOC, having a vapor pressure or sum of partial pressure of 0.02 pounds per square inch absolute (1 millimeter of mercury) or greater at standard conditions;

10. Tanks, reservoirs, containers, and bins which have a capacity in excess of 2,000 cubic feet and which are used for the storage of solid particulates;

11. Stationary material handling equipment using pneumatic, bucket or belt conveying systems from which direct or indirect emissions of air contaminant occur;

12. Commercial fuel burning equipment having a heat input rate of 1,000,000 Btu per hour or greater to the burning chamber;

13. Any equipment used for the burning of non-commercial fuel, crude oil or process byproducts in any form;

14. Any incinerator, except incinerators constructed, installed or used in one or two family dwelling or in multi-occupied dwellings containing six or less family units, one of which is owner occupied;

15. Any waste or water treatment equipment which may emit air contaminants, including but not limited to, air stripping equipment, aeration basins, surface impoundments, lagoons, sludge tanks, dewatering equipment, soil cleaning equipment, conveying equipment, digesters, thickeners, flocculators, driers, fixation equipment, composing equipment, pelletizing equipment and grit classifying equipment if the concentration in the water of each TXS equals or exceeds 100 parts per billion by weight or the total concentration in the water of the VOC equals or exceeds 3,500 parts per billion by weight;

16. Equipment used for the purpose of venting a closed or operating dump, sanitary landfill, hazardous waste landfill, or other solid waste facility, directly or indirectly into the outdoor atmosphere including, but not limited to, any transfer station, recycling facility, or municipal solid waste composing facility;

17. Any source operation which has the potential to emit any TXS at a rate greater than 0.1 pounds per hour (45.4 grams per hour);

18. Any equipment required to have air pollution control apparatus pursuant to any applicable provision of N.J.A.C. 7:27-16;

19. Any control apparatus serving equipment for which a permit is required pursuant to this section; or

20. Newspaper printing equipment subject to N.J.A.C. 7:27-8.2(a)2. For newspaper printing equipment in operation on or before November 1, 1994, applications must be filled in accordance with this subchapter by September 1, 1995.

6.2.3 New Jersey Ambient Air Quality Standards

In order to maintain and continuously improve the overall air quality within the State, ambient air quality standards are set for various air contaminants. N.J.A.C. 7:27-13 defines the New Jersey Ambient Air Quality Standards (NJAQQS). Standards are defined for six air contaminants. Namely, suspended particulate matters, sulfur dioxide, carbon monoxide, ozone, lead, and nitrogen dioxide.

NJAQQS are also defined and explained in detail in the technical manual "Guidance on Preparing an Air Quality Modeling Protocol." A copy of this technical manual can be requested for a fee by calling the NJDEP Map Sales and Publications Office at (609) 777-1038.

6.3 Emission Statement

If a facility is subject to the Operating Permit Rule, it is also subject to filing an annual Emission Statement. This statement details the actual emissions from the facility based on records of material use and total production. The emission Statement Rules are found in N.J.A.C. 7:27-21.

The NJDEP mails the emission statement forms in January. The completed statements are due April 15th of each year.

6.4 Performance Testing for Emissions

Sometimes performance tests are needed to measure your emissions or control equipment efficiency. Performance testing helps you know if you are meeting emission limits and control equipment efficiencies in your permit. We may require testing as a condition of your operation permit approval. N.J.A.C. 7:27B, Sampling and Averaging Procedures, describes procedures and air test methods for performance testing in the State of New Jersey. Please review Subchapters 1, 2, 3, and 4, and Appendices 1 through 6.

Additional information can be found in the technical manual, "Air Contaminant Testing and Monitoring." See *Appendix I* in the *Operating Permit Application Package.*

7.0 Flexibility in Your Operations

The Operating Permit forms have provisions that allow you to build operational flexibility into your permit. For example, you may want to take advantage of the batch process method of reporting your data, or add additional operating scenarios to avoid modifying your Operating Permit for anticipated changes.

7.1 Operating Scenarios

After you have an Operating Permit for your total facility, your operations may change. You may have operational changes or changes with short time tables. These changes may cause you to obtain an Operating Permit modification. Applying for and waiting for a modification may be inconvenient. If you can foresee the various modes of operation that you may need, you can include them in your facility's Operating Permit. If so, you would not need to amend your Operating Permit when you switch operating modes.

In your application, you must describe each operating scenario or family of operating scenarios. Each scenario must have its own calculations, methods of monitoring, and recordkeeping. The monitoring and recordkeeping must be specific enough to always verify your compliance status. When you switch scenarios, you must record related data. These may include the date, time, duration, and production totals for each change of the scenario. *Part II* of the *Guidance Document* discusses recordkeeping and reporting in greater detail.

An example of two operating scenarios is a boiler that uses natural gas as its primary fuel, and fuel oil as a backup fuel. Different recordkeeping and monitoring is done when fuel oil is used than when gas is used. For instance, you would track the sulfur content while using fuel oil, but not while using gas.

Another example is a printing press, with control equipment for volatile organic compounds, using both solvent-based inks and water-based inks. When you use water-based inks, you may not have to run the control equipment at all. If you do run the control equipment, it would likely be at a different efficiency than when you use solvent-based inks. You should include both operating scenarios in the Operating Permit application.

7.2 Intra Facility Emission Trading

Intra Facility Emission Trading may apply to your facility. Intra Facility Emission Trading is another way to avoid delays when making changes within your facility. Intra Facility Emission Trading applies to the emissions of a group of emission units and is facility specific. A facility may impose an emission cap (upper limit) on the

emissions from a group of emission units. Intra Facility Emission Trading allows you to exchange emission increases with emission decreases that occur within your facility. The facility cannot exceed the cap or any other emission limits.

To use Intra Facility Emission Trading, request it in your Operating Permit application. You must also propose your monitoring and recordkeeping methods as part of your compliance plan to quantify the emission trades. Options for monitoring and quantifying the trades range from simple to complex as shown by these examples:

- Fuel use or material usage records
- Calculations based on acceptable engineering estimating techniques
- Measurement of emission, process parameters, control equipment parameters, and material data performed periodically
- Continuous monitoring systems for process or control equipment parameters, or for emissions.

8.0 Confidential Material in an Application

Your Operating Permit application should contain detailed information about your facility. You may wish to keep some of that material confidential. Normally, everything submitted to the NJDEP is available to the public. NJDEP allows some kinds of data, such as trade secrets or sales figures to be kept confidential. Facility data related to emissions may not be kept confidential.

For the NJDEP to treat information in your application as confidential, you must submit a written request to the NJDEP. This request should identify what specific data in your application is confidential. You must state the reason for keeping the data confidential and certify that the material is confidential.

Specific items allowed to be confidential may include:

- Trade secret information
- Processes or methods of production unique to the owner or operator.

The NJDEP will review your request and reply in writing. If we approve your request, the confidential material will be kept confidential.

Once we have approved a piece of information as confidential, you must submit another copy of your application with the confidential data removed. That copy is for the public file. If you send the NJDEP any other documents that contain the confidential data, you must label it and request confidential status again. It is your responsibility to properly label (approved) data as confidential. The NJDEP staff will not sort documents for data that may be confidential, but are not labeled.

Procedure for Making a Confidentiality Claim (N.J.A.C. 7:27-1.6)

(a) Any person required to submit information to the Department under this chapter, or allow the Department to obtain such information, which such person believes in good faith to constitute confidential information, may assert a confidentiality claim by following the procedures set forth in this subchapter.

(b) A claimant shall submit to the Department (at the address provided in N.J.A.C. 7:27-1.8) a confidential copy and, upon the Department's request, a preliminary public copy of any record containing asserted confidential information. The preliminary public copy shall carry a notation stating that confidential information has been deleted. The Department may disclose the preliminary public copy to any person, without restriction or limitation.

(c) The claimant shall label the first page of the confidential copy "CONFIDENTIAL COPY." At the top of each page of the confidential copy, which page contains information that the claimant asserts is confidential information, the claimant shall place a boldface heading reading "CONFIDENTIAL." The claimant shall clearly underscore or highlight all information in the confidential copy which the claimant asserts to be confidential, in a manner which shall be clearly visible on photocopies of the confidential copy.

(d) The claimant shall seal the confidential copy in an envelope displaying the work "CONFIDENTIAL" in bold type or stamp on both sides. This envelope shall be enclosed in another envelope for transmittal to the Department. The outer envelope shall bear no markings indicating the confidential nature of the contents.

(e) The claimant shall send the package containing the confidential copy to the Department by certified mail, return receipt requested, or by other means providing a receipt for delivery.

(f) The claimant shall include in the package a written designation of a person to receive notices pursuant to N.J.A.C. 7:27-1.7.

IMPORTANT NOTE: If you do not request and receive approval to have material treated as confidential, stamping the word "Confidential" on a document will not cause the NJDEP to treat it as confidential. For material to be treated as confidential, you must submit a written request for confidentiality and the NJDEP must approve your request.

The NJDEP can agree to keep your data confidential. However, if the EPA requests Operating Permit information from the NJDEP, the Agency must provide it. When making your request for confidentiality to the NJDEP, you may choose to address the letter as a joint Agency request. If the request is addressed to both Agencies, the NJDEP will attach the confidentiality request to the Operating Permit information submittal to the EPA in accordance with the regulations as published in 40 CFR 70.4(j)(1). 40 CFR 2 governs requests for the EPA to keep data confidential. You should address requests for confidentiality to the EPA as follows:

Air Compliance Branch
US EPA, Region II
290 Broadway
New York, NY 10007-1866

9.0 A Complete Operating Permit Application

A complete Operating Permit application contains information about your emissions and your facility. It is the starting point for your Operating Permit application review. Your application should include the facility and emissions data you have collected based on the suggestions offered in this Guide.

The NJDEP has developed standard forms you must use when you apply for a permit. These forms list the information needed by the NJDEP to write a permit for your facility. N.J.A.C. 7:27-22.6 details the information you must supply in an application.

The *Application Forms Master List,* as found in the *Instructions Section* of the *Operating Permit Application Package*, can serve as a table of contents for your application. You can also use this form as a checklist while you prepare your application. It helps to monitor those portions of the application you have completed.

Administrative completeness of an operating permit application includes review of all information deemed applicable by NJDEP. An administrative completeness checklist is provided in *Appendix D*. The checklist includes the review of information provided by the applicant in *Sections A* through *F* of the applications forms package and the supplemental data forms.

The facility site information, emission summary from the facility, component inventory at the facility, individual emission unit or batch process application and compliance plan will be reviewed. During an administrative review, an application is generally examined for completeness of the all the necessary forms supplied in the forms applications package. This review includes verification of type of facility, relationship of equipment, type of control devices, how equipment is subject to state and federal rules, what types of permit exists for the equipment, compliance status of the equipment, and grandfathered status of equipment. *Appendix D* of the application package states all the requirements which are necessary for an application to be administratively complete. In addition, an application will not be covered under an application shield and possibly permit shield if the application is not deemed complete by applicable date set forth by NJDEP.

The applicant will be notified in writing by NJDEP as to the status of the permit application. Additional information, if necessary, will be requested by NJDEP.

Your application also covers compliance issues. After you decide what air quality Rules apply to your facility, you must determine whether you comply with them. Your application should outline how you will correct any situations where your facility does not comply at the time you submit the application. Also, you must submit a compliance plan. *Guidance Document Part II - Determining Compliance* helps you work through the compliance issues for your application.

Your application must certify that the information is complete and correct to the best of your knowledge. A responsible official must sign this certification. The signer can be a president, a general partner, or a ranking elected official. The person signing an application is responsible for its contents, no matter who prepared it.

9.1 The Importance of an Administratively Complete Application

The process to obtain a permit will not continue until your permit application is administratively complete. During the administrative completeness review, the NJDEP checks that you signed your application, used the NJDEP's forms, and made no obvious omissions. A permit application that is "right the first time" saves time. If a permit engineer has to request additional information, it could delay your permit.

By filing a timely and administratively complete application, you may also benefit from the "application shield" as defined in N.J.A.C. 7:27-22.7. The “application shield” allows for operation of the facility during the Operating Permit review process. It is contingent upon timely and administratively complete applications. The “application shield” is provided for initial and renewal Operating Permit applications. Suggested dates for early submittal are given in *Table 9-1*. The “application shield” terminates either upon final action on an Operating Permit or failure of the applicant to submit additional information requested by the Department within the deadline established by the Department pursuant to the completeness review.

9.2 Due Dates for Completed Applications

Due dates for complete permit applications are determined by the facility’s primary SIC codes (see *Section 4*). *Table 9-1* shows the due dates for the submittal of Operating Permit applications.

9.3 What Happens to Your Application at the NJDEP?

Figure 9-1 is a flowchart showing the process the NJDEP uses to issue an Operating Permit for your facility. After you submit a permit application, the NJDEP performs two reviews. During the first review, the administrative completeness review, the NJDEP checks that you signed your application, used the NJDEP's forms, and made no obvious omissions. The second review is the technical completeness review. This is when the NJDEP staff engineers analyze the content and technical details of your application. The PTE calculations are reviewed and Rule citations checked, among other things.

Within 30 days of receipt of an Operating Permit application, the NJDEP sends a letter telling you if your application is complete. If the application is not complete, the NJDEP explains what must be added or revised to complete the application. If the NJDEP fails to respond within 60 days, then the application is deemed complete. Once the application is complete, the process of issuing your Operating Permit starts. If your application is not complete, the process stops and it will delay your permit.

A complete Operating Permit application allows the NJDEP staff engineer to continue the process and draft your permit. The staff engineer may then contact you to discuss your application, ask questions, and request other necessary information. The permit engineer can also answer your questions regarding your permit.

Drafts of facility Operating Permits and some modifications must have a public notice. The public notice announces that the NJDEP intends to issue your permit and will accept comments from the public on the draft permit. The public comment period lasts 30 days. If a facility is within 50 miles of a state border, the neighboring state also has the opportunity to review the draft permit.

The Bureau of Operating Permits will reply to each public comment. The draft permit may have to be revised based on public comments. Occasionally, the comments indicate a need for more analysis. For example, the comments might question whether you properly followed the Rules, or if you used the right data.
For Part 70 permits, the EPA has 45 days to comment. This 45-day comment period occurs after the 30-day public comment period. If the EPA has comments that require changes to your draft permit, then we will revise your draft permit. If no comments arise that require changes to the draft permit, we will issue your permit.

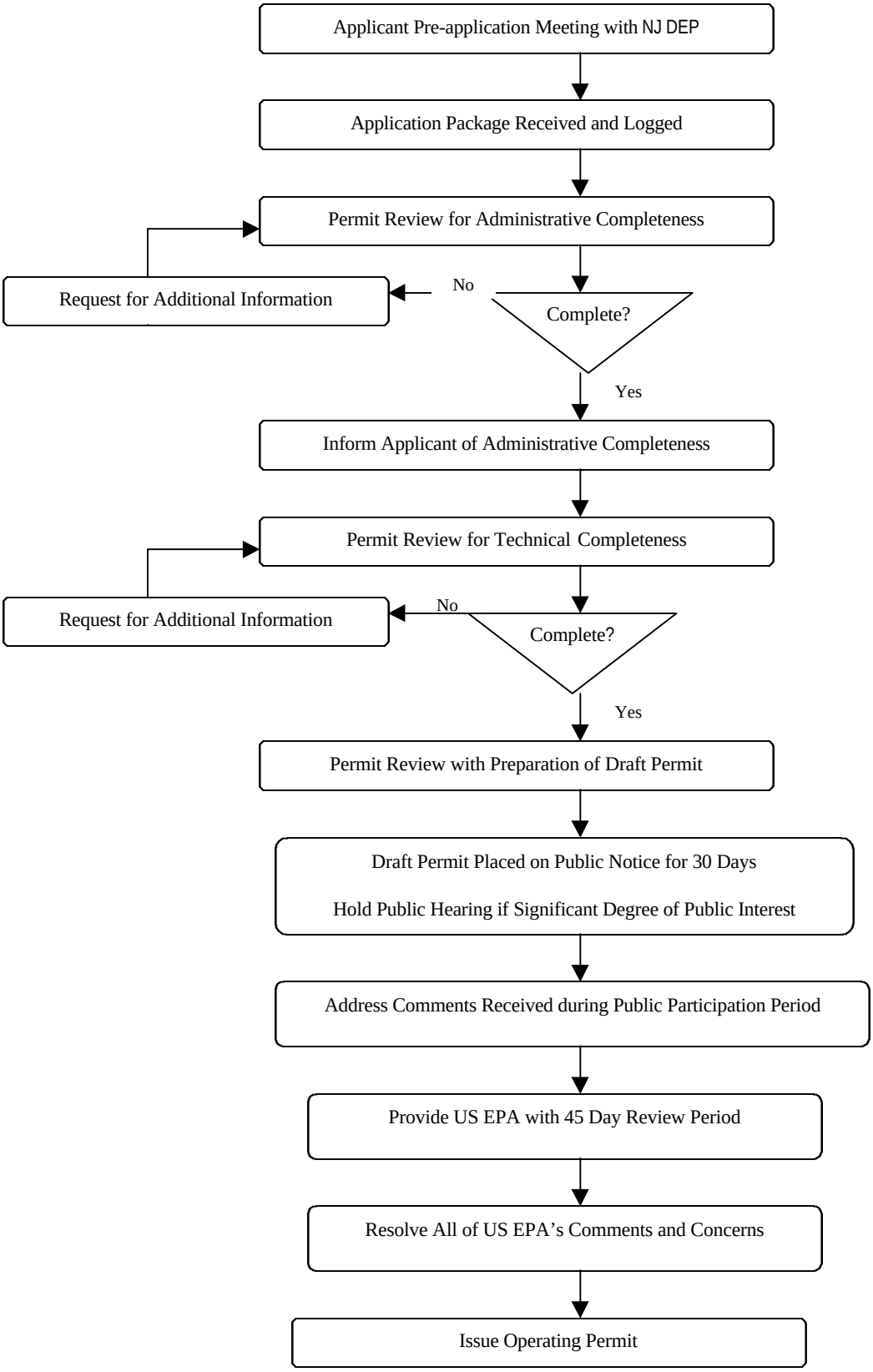

Figure 9-1 Process to Issue an Operating Permit for a Total Facility

Table 9-1 Operating Permit Application Due Dates Reference: N.J.A.C. 7:27-22.5		
SIC Code	**Complete Application Deadline**	**Suggested Early Submittal**
2000 – 2086	8/15/95	5/15/95
2088 – 2190	8/15/95	5/15/95
4900 – 4910	8/15/95	5/15/95
4911[1]	8/15/95	5/15/95
4912 – 4939	8/15/95	5/15/95
6400 – 6999	8/15/95	5/15/95
8300 – 9999	8/15/95	5/15/95
4911[2]	11/15/95	8/15/95
4200 – 4399	11/15/95	8/15/95
5900 – 6399	11/15/95	8/15/95
7000 – 7199	11/15/95	8/15/95
7500 – 8299	11/15/95	8/15/95
0000 – 1299	5/15/96	2/15/96
1400 – 1999	5/15/96	2/15/96
3200 – 3599	5/15/96	2/15/96
4000 – 4199	5/15/96	2/15/96
4400 – 4499	5/15/96	2/15/96
4800 – 4899	5/15/96	2/15/96
5300 – 5499	5/15/96	2/15/96
1300 – 1399	11/15/96	8/15/96
2700 – 2799	11/15/96	8/15/96
2900 – 2999	11/15/96	8/15/96
3600 – 3999	11/15/96	8/15/96
4500 – 4799	11/15/96	8/15/96
7300 – 7499	11/15/96	8/15/96
2200 – 2599	5/15/97	2/15/97
3000 – 3199	5/15/97	2/15/97
5000 – 5299	5/15/97	2/15/97
5500 – 5899	5/15/97	2/15/97
7200 – 7299	5/15/97	2/15/97
2087	11/15/97[3]	8/15/97
2600 – 2699	11/15/97	8/15/97
2835 – 2899	11/15/97	8/15/97
2800 – 2834	5/15/98	2/15/98
4940 – 4999	5/15/98	2/15/98

1 If the facility is located in Atlantic, Burlington, Gloucester, Hudson, Hunterdon, Salem, Union, Camden, Monmouth, Sussex, or Warren County.

2 If the facility is located in Bergen, Cape May, Cumberland, Essex, Mercer, Middlesex, Ocean, Morris, Passaic, or Somerset County.

3 Refer to October 20, 1997 edition of the New Jersey Register for extensions given to facilities choosing to submit Operating Permit Application electronically.

10.0 Electronic Data Interchange

Electronic Data Interchange (EDI) is designed so that an applicant can file an application or submit a seven-day-notice change to the Department on forms obtained from the Department via EDI. An applicant may submit any application or notice to the Department electronically, using predefined standards and information exchange protocols to be contained in the Department's Technical Manual on Electronic Transfer of Information, which will be available from the Department at the address listed at N.J.A.C. 7:27-22.3(t). This technical manual will specify a data dictionary and a file format, and any ANSI X12 compliant conventions required by the Department.

10.1 NJDEP Air Quality Permit Program Bulletin Board System

The NJDEP has established electronic data interchange capability for the initial submittal of an Operating Permits application. A database layout and other related air information is available on the Air Quality Permit Program (AQPP) section of the NJDEP bulletin board system (BBS). For detailed information on how to prepare and submit applications electronically, you can download the guidance document found under the Operating Permits File Area. The BBS can be accessed by dialing (609) 292-2006 (8,N,1). For assistance, you may contact System Operator by telephone at (609) 292-4860 from 10:00 a.m. to 4:00 p.m. Eastern Standard Time or by E-Mail via rhyjack@dep.state.nj.us.

10.2 EPA Technology Transfer Network

The EPA's Technology Transfer Network (TTN) is a network of 18 electronic bulletin boards. This network provides information on emission factors, new and proposed regulations, and many other topics. Use of this service is free (except telephone charges). You may download or review information on this system by dialing (919) 541-5742 with your computer modem. You can also get information and assistance by calling the TTN help desk in Research Triangle Park, North Carolina, from 11:00 a.m. to 5:00 p.m. EST at (919) 541-5384. Internet access is via TELNET ttnbbs.rtpnc.epa.gov.

Following is a list of the technical areas (bulletin boards) available on the TTN.

EMTIC - Emission Measurement Technical Information Center
Provides access to emission test methods and testing information for the development and enforcement of national, state, and local emission prevention and control programs.

AMTIC - Ambient Monitoring Technology Information Center

Provides information and all Federal Regulations pertaining to ambient monitoring. Information on monitoring methodology, field and laboratory studies are also included.

AIRS - Aerometric Information Retrieval Systems
Provides information and documentation on the use and acquisition of air quality and emissions data from the AIRS mainframe computer systems.

BLIS - RACT/BACT/LAER Information System
Offers a compilation of air permits from local, state, and regional air pollution control agencies.

NATICH - National Air Toxics Information Clearinghouse
Contains information submitted by EPA, state, and local agencies regarding their air toxics programs to facilitate the exchange of information among government agencies.

COMPLI - Stationary Source Compliance
Provides stationary source and asbestos compliance policy and guidance information.

NSR - New Source Review
Offers guidance and technical information within the NSR permitting community.

SCRAM - Support Center for Regulatory Air Models
Provides regulatory air quality model computer code, meteorological data, documentation, as well as modeling guidance.

CHIEF - Clearinghouse for Inventories and Emission Factors
Contains the latest information on air emission inventories and emission factors. It provides access to tools for estimating emissions of air contaminants and performing air emission inventories for both criteria and toxic pollutants.

CAAA - Clean Air Act Amendments
Has information on the Clean Air Act Amendments of 1990, regulatory requirements, implementation programs, criteria pollutants, and technical analyses.

APTI - Air Pollution Training Institute
Describes current course offerings on air pollution, including curriculum, schedules, locations, costs, and up-to-date changes.

CTC - Control Technology Center
Offers free engineering assistance, a hotline, and technical guidance to state and local air pollution control agencies in implementing air pollution control programs.

CarD - Car Dialogue

Provides information on greenhouse gas car dialogue.

OMS - Office of Mobile Source
Provides information on mobile source related issues such as, employee trip reduction program, reformulated gasoline, non-road engine emissions, specialized fuel use/emissions, vehicle testing programs, etc.

ORIA - Office of Radiation and Indoor Air
Provides information on exposure to radiation and indoor air contaminants. This office works with state and local government, industry and private groups, and citizens to promote actions to reduce exposure to harmful level of radiation and indoor air contaminant.

SBAP - Small Business Assistance Program
Shares information on state small business assistance programs and materials development. Allows states to communicate amongst small business assistance programs. Provides a listing of state's SBAP contacts and telephone information.

GEI - Geographic/Ecosystem Initiatives
Provides information on ecosystem protection using conventional environmental regulations and non-conventional methods.

10.3 Factor Information and Retrieval Data System

The Factor Information and Retrieval Data System (FIRE) is a PC program containing the EPA's recommended criteria and hazardous air pollutant emission factors. FIRE is available through the CHIEF bulletin board system described above. FIRE includes information about industries and their emitting processes, the chemicals emitted, and the emission factors.

10.4 Fax CHIEF

With the EPA's Fax CHIEF service, you can obtain a fax of selected emission factors from the *Compilation of Air Pollution Factors* (AP-42 Series). Users can call and enter their requests using the handset and dial pad on most fax machines. Fax CHIEF will transmit the desired sections within minutes. To use this service, contact one of the following two phone numbers: (919) 541-0548 or (919) 541-5626.

Operating Permits Guidance Document
Part II
Determining Compliance

NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Title V

AIR QUALITY PERMITTING PROGRAM

OPERATING PERMITS GUIDANCE DOCUMENT

Part II
Determining Compliance

New Jersey Department of Environmental Protection
401 East State Street, PO BOX 027
Trenton, New Jersey 08625-0027

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Detailed Contents

Preface

The *NJDEP Operating Permits Guide* is a three-part document intended to help you learn if you need to apply for an Operating Permit. If you do need to apply, the Guide helps you fill out an application.

Part I - Defining Your Facility shows how to describe your equipment and quantify its emission. After defining your facility, you may or may not need to apply for an Operating Permit.

Part II - Determining Compliance tells how to comply with air quality Rules and Regulations and prepare the compliance portion of your Operating Permit application.

Part III - Making Changes defines methods for proposing modifications to the facility Operating Permit. It describes Administrative Amendments, Seven-Day Notice Changes, Minor Modifications and Significant Modifications and offers examples to guide you in choosing the appropriate mechanism for changing your Operating Permit.

You may find it helpful to read New Jersey's *Technical Manual for Air Quality Permits - Manual 1001*. It introduces you to New Jersey's air quality preconstruction permit program and permit application process. The manual is available either by calling the Bureau of Operating Permits or by downloading the document from the Air Quality Permit Program's Electronic Bulletin Board Service, described in *Section 10 of Guidance Document I.*

Please take your time going through each part of the Guide. Do not expect to read all parts in one day. You will find some things do not apply to your facility. Consequently, you probably will not need to read every section in detail.

To help you define key terms, the Operating Permit Application package contains a glossary and an acronym list. To answer your questions, we include phone numbers. In addition, we include ordering information in *Appendix A* should you want copies of the Air Quality Rules and Regulations.

IMPORTANT NOTE: The NJDEP has tried to make the *Operating Permits Guidance Document* as complete as possible. However, it is not a substitute for the Rules and Regulations themselves. We will revise the Guide periodically, but we will not update it each time that the NJDEP (or the EPA) revises or adds a specific requirement. It is your responsibility to find out which requirements apply to your facility.

Part II - Determining Compliance

Part II of this Guide is an introduction to the New Jersey Operating Permit Compliance Program. In the Operating Permit Application, your facility must include a compliance plan, a certification of compliance and, if necessary, a compliance schedule. This Guide helps you develop a facility specific compliance plan with monitoring, recordkeeping and reporting practices and direction for completing the Application in accordance with your facility operating conditions and Air Quality Rules and Regulations.

Part II helps you:

- Address Rules and Regulations
- Understand Compliance Responsibilities, and
- Develop a facility specific Compliance Plan.

If you have questions about the material covered in Part II, call or write to the NJDEP for additional information.

NJDEP Bureau of Enforcement Operations 401 E. State St., 4th Floor, PO BOX 422, Trenton, NJ 08625-0422		
Central Region	(609) 584-4100	Burlington, Mercer, Middlesex, Monmouth, and Ocean County Jurisdiction.
Metropolitan Region	(201) 669-3935	Bergen, Essex, Hudson and Union County Jurisdiction.
Northern Region	(201) 299-7700	Hunterdon, Morris, Passaic, Somerset, Sussex and Warren County Jurisdiction.
Southern Region	(609) 346-8071	Atlantic, Camden, Cape May, Cumberland, Gloucester and Salem County Jurisdiction.

NJDEP Bureau of Operating Permits 401 E. State St., PO BOX 027, Trenton, NJ 08625-0027		
Operating Permit Information	(609) 633-8248	Responds to requests for Operating Permit application or application information. Can send copy of Operating Permit Rules.
Small Business Assistance Program	(609) 292-3600	Helps business with fewer than 100 Program employees to understand the Air Quality Rules.
Clean Air Act Small Business Ombudsman	(800) 643-6090 (609) 292-0700	Provides assistance to small businesses; helps to resolve complaints and disputes.
Technical Services	(609) 530-4041	Provides information on monitoring and stack testing.

1.0 Rules and Regulations

To develop a compliance plan, start with the air quality Rules and Regulations that apply to your facility. Many requirements tell you specifically how to establish monitoring, recordkeeping and reporting practices. Your compliance plan must at a minimum include those practices required in a Rule or Regulation. After reviewing this section, you will also want to review the Rules and Regulations to make sure you understand all requirements.

We address the following Rules and Regulations in this section:

- National Emission Standards for Hazardous Air Pollutants
- New Source Performance Standards
- Title IV Acid Rain Program
- Title VI Stratospheric Ozone Protection
- Enhanced Monitoring
- Prevention of Significant Deterioration
- New Jersey Air Quality Rules

1.1 National Emission Standards for Hazardous Air Pollutants

Title III of the 1990 Clean Air Act Amendments expanded the number of air pollutants and emission source categories regulated under the National Emission Standards for Hazardous Air Pollutants (NESHAPs) program. Prior to 1990, the Clean Air Act regulated nine hazardous air pollutants (HAPs) and affected only a small group of sources. The Regulations for the nine HAPs are found in Part 61 of Title 40 of the Code of Federal Regulations (40 CFR 61). The 1990 Clean Air Act Amendments regulate 188 hazardous air pollutants and require emergency response planning for the accidental release of an additional 160 air contaminants. The Regulations covering the additional HAPs are found in 40 CFR 63 - NESHAPs for Source Categories and Part 68 - Risk Management for Chemical Accidental Release Prevention.

Facilities must comply with all parts of the NESHAPs program and may be subject to more than one HAP standard.

1.2 New Source Performance Standards

Section 111 of the Clean Air Act "Standard of Performances of New Stationary Sources," required the EPA to establish federal emission standards for stationary source categories that cause or contribute significantly to air pollution. Regulated air contaminants emitted by identified source categories and their respective emission limits vary for each NSPS promulgated. The regulated air pollutants include particulate matter, Sulfur dioxide, Carbon monoxide, Oxides of Nitrogen, Volatile Organic Compounds, Acid Mist, Total Reduced Sulfur (TRS), and Fluorides. The regulated sources can be found in 40 CFR 60.

Each NSPS includes emission limits, monitoring, reporting and recordkeeping requirements. These standards may affect facilities that construct, modify or reconstruct any specific emission source or unit. If the EPA finalizes an NSPS that applies to your source during the life of the source's permit, you must comply with the NSPS even if it is not yet incorporated into your permit.

Facilities must also comply with the General Provisions of the NSPS program. These provisions include notification and testing, in addition to monitoring, reporting and recordkeeping procedures for each specific source. To determine which NSPS General Provisions apply to your facility, refer to 40 CFR, Subpart A (Sections 60.1 through 60.18).

1.3 Title IV Acid Rain Program

Guidelines for the Acid Rain Program are outlined in the Title IV of the Clean Air Act Amendments of 1990. The acid rain provisions require improvements in the removal of sulfur dioxide and oxides of nitrogen by utility sources at or prior to the year 2000. The 1980 baseline level for each air contaminant was approximately 20 million tons per year. Sulfur dioxide levels will decrease roughly 50 percent or better and oxides of nitrogen will decrease approximately ten percent from 1980 levels as a result of the acid rain program. This required reduction will affect utility power plants and very large boilers as indicated in 40 CFR 72.6.

Compliance plans will indicate how a facility will operate according to the provisions in the acid rain program. Refer to 40 CFR 75 for more information on monitoring, recordkeeping and reporting requirements of the acid rain program. Similar monitoring or reporting requirements associated with other regulations may apply to your facility. Even if you meet a Federal acid rain requirement, do not assume you have indirectly satisfied other regulatory requirements. For example, both the Acid Rain Regulations and a New Source Performance Standard may require the installation of a continuous emission monitor to track sulfur dioxide emissions. The compliance plan must show compliance with both sets of continuous emission monitoring requirements.

Clearly mark the portions of the compliance plan to satisfy Federal acid rain requirements. This is important because the acid rain permit is a distinct portion of the Operating Permit.

1.4 Title VI Stratospheric Ozone Protection

Sections 606 through 612 of Title VI of the *Clean Air Act Amendments of 1990* protect the stratospheric ozone layer. Section 606 requires phasing out use of certain ozone-depleting substances. Sections 608 and 609 specify proper procedures for maintaining and repairing appliances, heating, ventilation, and air conditioning (HVAC) systems, or motor vehicles containing ozone depleting materials. If Sections 608 and 609 affect you, certify to the EPA that you properly train the persons who service this equipment, in the operation of recycling and recovery equipment, and comply with Rule requirements.

1.5 Enhanced Monitoring

One regulation that may affect how you develop your compliance plan is the Federal Enhanced Monitoring Rule. This Rule, proposed by EPA on October 22, 1993, is currently being reproposed. A section has been reserved for the regulation in 40 CFR 64. The Rule applies to Part 70 sources.

Be sure to check the status of the Federal Enhanced Monitoring Rule to see how it will apply to the facility before completing the compliance plan portion of the Operating Permit application.

1.6 Prevention of Significant Deterioration

A permitting process as defined in 40 CFR 52 which is applicable to new or modified major emitting sources located in areas attaining the national ambient air quality standards for at least one air contaminant. Most facilities operating in non-attainment areas will need to focus on converting existing permits to Operating Permits.

PSD applies to major new stationary sources of air pollution and to major modifications of existing sources. There are currently 28 source categories with potential to emit (after the application of control technology) 100 tons per year or more of any regulated air pollutant under the Clean Air Act Amendments that are subject to PSD review. All sources emitting greater than 250 tons per year of any regulated air pollutant are subject to PSD review. Both criteria and noncriteria air contaminants are subject to PSD review if any of the regulated air pollutants are emitted in significant amounts by a major new source or by a major modification.

1.7 New Jersey Air Quality Rules

Commonly known as the New Jersey Administrative Code (N.J.A.C.), Permit Rules are found in N.J.A.C. 7:27-8. The Bureau of Air Pollution Control governs the emission and activities as a result of introducing air contaminants into the ambient atmosphere.

2.0 Your Compliance Responsibilities

It is your responsibility to know and comply with the State and Federal Air Quality Rules and Regulations that apply to your facility. You must identify these requirements in your permit application. When the NJDEP issues your Operating Permit, it will contain emission limits and operational conditions based on the Rules and Regulations. Therefore, to comply with your Operating Permit, the NJDEP assumes you meet the underlying requirements that apply to your facility. Always keep in mind that it is your responsibility to ensure that your Operating Permit is accurate and up-to-date with any new and changing Rules or Regulations. You can track regulatory changes in the Federal Register and the New Jersey State Register.

In the Operating Permit application, you must include a compliance plan, a certification of your compliance status, and if necessary, a compliance schedule. This section briefly describes each of these items. *Sections 3* through *5* provide more detailed information on how to complete each of these parts of your application.

2.1 Compliance Plan

All permit applications must include a compliance plan. In this plan, you describe how you will demonstrate that your facility complies with any air quality Rules and Regulations that are applicable. A compliance plan includes specific monitoring, sampling, recordkeeping, and reporting that you must follow during the life of your Operating Permit. If you follow your compliance plan, you can determine if you meet the terms and conditions of your permit. The compliance plan is an enforceable part of your permit. Make sure you propose a plan that you can carry out. (See *Section 3* for details on the compliance plan)

2.2 Compliance Certification

In the Operating Permit application, you must report if you are in or out of compliance with the air quality Rules and Regulations that apply to you. This is the compliance certification. All certifications in your Operating Permit application, including the compliance certification, are legally binding. This certification assures the NJDEP that the information you are providing in the application is true and complete. Under the *Clean Air Act Amendments of 1990*, providing false information in your Operating Permit application is a felony, subject to criminal prosecution. You are personally responsible for the accuracy of your application including the compliance certification form. (See *Section 4* for details on the compliance certification)

2.3 Compliance Schedule

After you have completed the compliance plan form, you will know if you do not meet any air quality Rule or Regulation that applies to your facility. If you are not in compliance for any reason, you must develop a compliance schedule as part of your Operating Permit application.

A compliance schedule, if needed, tells the NJDEP how and when you plan to comply. It also outlines how you will report your progress to the NJDEP. Once you determine that your facility is out of compliance you must begin working toward compliance immediately. (See *Section 5* for details on the compliance schedule).

3.0 Developing a Compliance Plan

Your compliance plan is important for several reasons. After you receive your permit, you must certify your compliance status every year. In this annual compliance certification, you must certify whether your compliance status for the year was continuous or intermittent. You are in continuous compliance if your monitoring data shows you are operating within the emission limits and standards that apply to your facility throughout the reporting period. Significant time lapses between measurements can occur if the data show your facility is in continuous compliance. You are in intermittent compliance if there are any deviations for that reporting period or if the data collected show you are not complying with the emission limits and standards that apply to your facility.

You must also provide supporting information showing how you determined your compliance status. Designing your compliance plan is important, so you can verify if you are in continuous compliance. By developing a good plan, you can track operations and make sure you are not violating any rule or regulation.

Other side benefits are associated with your compliance plan. Monitoring data may help to reduce operating costs. For example, results from monitoring data could give you the information you need to increase the combustion efficiency of your boiler or increase the capture and reuse of solvents at your coating plant. Ongoing monitoring can also alert you to potential problems with pollution control equipment. By developing a routine maintenance program, you can also reduce the risk of costly breakdowns.

3.1 A Compliance Plan

In the Operating Permit application, you must develop a compliance plan. A compliance plan shows how the facility will meet the Rules and Regulations. It includes specific monitoring, sampling, testing, recordkeeping, and reporting requirements. The plan will become an enforceable part of the permit. For this reason, it is important to develop a useful plan that you can implement.

3.2 The Elements of Your Compliance Plan

We have designed the Compliance Plan forms to enable flexibility and some degree of simplicity in developing your facility's compliance plan. Your facility's compliance plan will be divided into five categories. The five categories are:

Category I - Facility Specific Information
Category II - Intra Facility Emission Trading Groups
Category III - Operating Scenario Groups
Category IV - Batch Processes
Category V - Emission Units
Category VI - Insignificant Sources
Category VII - Non-Source Fugitive Emissions

To develop a compliance plan, complete a *Compliance Plan Form* for each emission unit and batch process included in your Operating Permit Application, and complete a *Compliance Plan Form* for each Intra Facility Emission Trading group described in *Part B.* Include *Supplemental Data Forms* in the appendix of your Operating Permit Application. In essence, your facility compliance plan consists of all the individual compliance plans completed.

The *Compliance Plan Form* asks information about air quality Rules and Regulations that apply to your specific operations described by an operating scenario, and equipment, control devices, and emission points subject to the listed Rules or Regulations. The *Compliance Plan Form* also asks which equipment and pollution control devices you will monitor or test. Each facility will be required to maintain records of performance tests and other emission measurement methods indicated in the Compliance Plan.

The facility will report Operation and Maintenance (O&M) procedures followed at the facility to the NJDEP in the *Compliance Plan Forms*.

The *Compliance Plan Form* includes basic instructions on how to monitor and record your pollution control equipment operations. In addition, the form lists standard reporting and performance test requirements that you may select.

3.2.1 Category I - Facility Specific Information

The information entered in this category includes the general rules and applicable requirements that pertain to your facility as a whole. You need not list general rules and applicable requirements that regulate the use of a single emission unit or batch

process. General rules and applicable requirements regulating the use of a single emission unit or batch will be categorized into *Categories IV* and *V*.

3.2.2 Category II - Intra Facility Emission Trading Group

This category enables you to develop a compliance plan for the Intra Facility Emission Trading (IFET) Group permitted in *Part B* of the application for the Operating Permit. The general rules and applicable requirements, monitoring and recordkeeping, entered in this category consist of the applicable requirements and methods you will use to demonstrate compliance with your Intra Facility Emission Trading emission limits. You may only use this category if your application included the emission units as an Intra Facility Emission Trading group in *Part B*. This category is used for the Intra Facility Emission Trading Group as a whole.

3.2.3 Category III - Operating Scenario Grouping

This category is available to facility operations permitted as Emission Units in *Part D* of the application. This category enables you to combine a number of emission units into a group. These emission units may be combined when the individual emission units have operating scenarios which have applicable requirements that are identical to the applicable requirements of the operating scenarios of other emission units.

An emission unit may have a few operating scenarios with applicable requirements that you can group with the other emission units operating scenarios. This same emission unit may also have applicable requirements that are unique to the emission unit operating scenario.

You may group the emission unit's operating scenarios with applicable requirements that are identical to other emission units operating scenarios into this category but the remaining emission unit's operating scenarios with unique applicable requirements will have to be entered into *Category V - Emission Units*. Therefore, one emission unit may have operating scenarios which can be grouped and other operating scenarios which cannot be grouped.

It is also possible for one emission unit operating scenario to have a number of applicable requirements which can be grouped with other emission unit's operating scenarios and also that same emission unit operating scenario may have a number of unique applicable requirements. The same is true here, as stated above, you may enter the emission unit operating scenario, with its applicable requirements which are identical to other emission unit's operating scenarios, into this category, however, you must also enter this same emission unit operating scenario with its unique applicable requirements into *Category V - Emission Units*. Therefore, an emission unit operating

scenario may appear in one or more groups and appear in *Category V - Emission Units*.

3.2.4 Category IV - Batch Process

This category is applicable to facility operations permitted as Batch Processes in *Part E* of the application. This is the only category that equipment permitted as Batch Processes can be entered into. This category provides a method of developing a compliance plan for each series of steps of an operating scenario in a batch process.

Sometimes a batch process may have several steps in various operating scenarios with overlapping requirements. In these cases you may combine two or more operating scenarios and steps into a single entry in the compliance plan. If one or more of the combined operating scenarios or steps had additional requirements, list those operating scenarios and steps as additional entries.

3.2.5 Category V - Emission Units

This category is applicable to those facility operations permitted as Emission Units in *Part D* of the application. This category gives you a method of developing a compliance plan for each individual operating scenario in an emission unit. If an emission unit has some operating scenarios with overlapping requirements, you can combine them as one entry in the compliance plan. If different emission units have similar applicable requirements for their operating scenarios, you may combine the operating scenarios and enter them in *Category III - Operating Scenario Groups*.

3.2.6 Category VI - Insignificant Sources

The information entered in this category includes the general rules and applicable requirements that pertain to insignificant sources at the facility. A demonstration of compliance is not required in the permit application for insignificant sources, although a statement of compliance with applicable requirements (for example, smoke and or sulfur in fuel) is required.

3.2.7 Category VII - Non-Source Fugitive Emissions

This category is applicable to facility activities which have typically gone unpermitted. Part 70 requires the facility to demonstrate compliance with the provision as cited at 40 CFR 70.3(d). Examples of non-source fugitives include dust from uncovered coal piles, leaking valves and pipe fittings, and dust from unpaved roads. This category gives the facility a method of developing a compliance plan for each non-source fugitive emission at the facility.

3.3 Methods of Demonstrating Compliance

Some air quality Rules and Regulations state exactly what to do in order to demonstrate compliance. If a Rule or Regulation does not include a specific method for showing compliance, you have some flexibility with the practices you think are appropriate. In all cases, if a preconstruction permit has been issued with a more stringent requirement, the preconstruction permit takes precedence.

3.3.1 Monitoring/Sampling

Direct Methods of Monitoring

Monitoring can involve the direct measurement of your emissions by utilizing the method of Stack Testing and/or Continuous Emission Monitors.

Continuous Emissions Monitors

A Continuous Emission Monitor System (CEMS) measures emissions at all times. A CEMS is generally the most reliable way to measure emissions and determine if your facility is in compliance. If you use a CEMS to determine compliance it must include a data collection system to record the monitored data. CEMS may be required to be certified by the Department.

Continuous Opacity Monitors

Use of a Continuous Opacity Monitor System (COMS) measures visibility of emissions at all times. Use of a COMS is generally the most reliable way to determine if your facility is in compliance. If you use a COMS to determine compliance it must include a data collection system to record your monitored data. COMS may be required to be certified by the Department.

Certifying Your Continuous Emission Monitor or Continuous Opacity Monitor

If you intend to use a CEMS/COMS, you may be required to conduct a certification test to show its accuracy. The certification test must follow the procedures listed in 40 CFR 60, Appendix B, procedures outlined in your permit, and procedures outlined in your CEMS/COMS protocol. If your facility is required to have a certified monitor, a protocol must be sent to the Department for review prior to the installation of the monitor. The protocol must include information describing the type of monitor to be installed, the operating range of the monitor, the data recording system to be used in conjunction with the monitor, and the procedures to follow to certify that the

CEMS/COMS is an effective method of monitoring compliance. A Quality Assurance/Quality Control Plan along with a format for reporting data must also be included as part of the CEMS/COMS protocol. Please review the Department's CEMS/COMS Technical Manual for additional details prior to submitting a protocol to the Department. The most recent edition of Technical Manual 1005 can be requested from the NJDEP Map Sales and Publications Office. See *Appendix I* in the *Operating Permit Applications Package*.

Upon approval of the protocol, the CEMS/COMS must be certified according to the procedures which were approved by the Department. The approved procedures become your certification test program. During the certification of the monitor the sources being monitored must be operating according to the requirements of the Technical Manual. This assures the Department that a representative emission level is present during the certification. The Continuous Emission Certification results must be submitted to the Department within the time specified in the permit.

Stack Testing

A stack test measures a sample of your emissions from the exhaust gas stream. Because it is done at one point in time, a stack test provides a snapshot of the actual emissions.

Worst case conditions are those resulting in maximum emissions. Often, the maximum production rate is your worst case condition. There are different worst case conditions for different air contaminants. If you do not test your emission unit or batch process at the worst case, the test may not be accepted.

You must also follow the test methods specified by a regulation and approved in your protocol. New Source Performance Standards often require you to follow a particular test method.

The NJDEP must approve all performance test procedures that are used for permit compliance prior to the test.

Test protocols must include all sampling and analytical procedures, a Quality Assurance/Quality Control plan, parameters to be monitored and also the proposed source operating scenario. Once protocol is approved by the Department a test date is then scheduled with the Department. You must schedule a date with the Department so that a representative from the Department may be present to observe the actual testing. Results of the test program, which include all sampling, analytical and quality assurance/quality control data, and operating scenario data during testing must be submitted to the Department in accordance with the schedule approved in the permit.

Please review the Department's Stack Testing Technical Manual for additional details prior to submitting a protocol to the Department. The most recent edition of the Technical Manual 1004 can be requested from the NJDEP Map Sales and Publications Office. See *Appendix I* in the *Operating Permit Applications Package*.

Indirect Monitoring

It is not always necessary to show compliance through direct measurement of the emissions. You can also monitor operations indirectly for example, equipment venting particulate to a baghouse. You can indirectly monitor compliance with particulate emissions by checking the pressure drop across the baghouse. If the pressure drop is within a certain range, emissions from a baghouse are probably within allowable limits. Manufacturer's information may help you determine an appropriate pressure drop range. If no reliable information is available, you may need to do a performance test showing you meet your emission limits when operating at that range.

You should design monitoring procedures to provide reliable data that can accurately indicate compliance. You should use test methods, and averaging period units consistent with the emission limits in a rule, regulation or preconstruction permit requirement. Monitoring techniques adequate for one operation may not meet the specific needs of another.

Sampling

Sampling is also an effective way to determine compliance. Sampling is often used to assure a particular solution or coating has the correct percent of Volatile Organic Compound or to assure you are burning a fuel with the correct percent of Sulfur.

3.3.2 Reporting

Reporting must be done according to the way it is spelled out in Federal or State Regulations, or in a preconstruction permit, which ever is most stringent. Schedules and formats for submitting these reports will be included as part of your facility's compliance plan along with the particular requirement. The most common required reporting is the Quarterly Excess Emission Monitoring and Performance Report (EEMPR). An EEMPR is often required when a Continuous Emission Monitor or Continuous Opacity Monitor is used to monitor your facility's emissions. If your facility is required to submit an EEMPR, the Department currently has a particular EEMPR form that must be used for reporting. The current form with instructions is available in the Department's CEMS/COMS Technical Manual. Your EEMPR must be submitted within thirty (30) calendar days of the close of every calendar quarter.

4.0 Your Compliance Certification

In your permit you must certify whether you are in compliance with the air quality Rules and Regulations that apply to your facility. This certification is known as your compliance certification. Part 70 of the Clean Air Act Amendments of 1990 requires a biannual certification by each facility. When making your certification, it is acceptable to specify only the requirements for which there is noncompliance. The compliance certification must certify whether your compliance status for the year was continuous or intermittent.

If your facility is currently out of compliance you must submit a compliance schedule indicating the nature of the noncompliance and how you propose to come into compliance (see *Section 4.1* for more details on noncompliance). It is also possible to be in a situation where there is an applicable requirement with a future effective date, in this type of situation you would state that it is a future requirement. For all future requirements you must certify that you will be in compliance by the effective date or submit a compliance schedule to explain your facility's plans for achieving compliance as near to that date as possible (see *Section 4.2* for more details on future requirements). A blanket statement can then be made that you are in compliance with all other applicable requirements listed in your compliance plan.

All compliance certifications must contain the proper certification language, found in N.J.A.C. 7:27-1.39. This certification must be made by a responsible official as defined in N.J.A.C. 7:27-1.4.

You must also provide supporting information showing how you determined your compliance status. Designing your compliance plan is important, so you can verify if you are in continuous compliance. By developing a good plan, you can track operations and make sure you are not violating any Rule or Regulation.

Serious consequences may result for making an improper certification. If you certify that you were in continuous compliance with a Rule or Regulation and the NJDEP later discovers that this is not a true certification, you are subject to enforcement action. You may even be subject to criminal proceedings. On the other hand, if you certify you are not in compliance with a requirement, you will not necessarily be subject to enforcement action, depending on the severity and duration of the noncompliance.

4.1 Noncompliance

Whenever you indicate noncompliance, either in the application or in the subsequent yearly certifications, you must submit a compliance schedule indicating the nature of noncompliance and how you propose to come into compliance.

If you are out of compliance with an applicable requirement but are meeting the requirements of an ACO which addresses the problem, you may submit a copy of the ACO as the compliance schedule.

In the event of noncompliance, it is recommended that you request an Administrative Consent Order from the Department at the earliest possible time. An ACO represents an agreement by the Department with how you will achieve compliance. If you wait until you submit your yearly compliance schedule to inform the Department of a noncompliance situation, you may be accruing all of the time from the time noncompliance occurred until the time the situation is rectified as time out of compliance. Many enforcement actions incorporate the duration of the noncompliance into the penalty calculation. An ACO may greatly limit potential penalty liability.

For all incidents of intermittent compliance, you must include a separate report detailing when the period of noncompliance began and ended, and the nature and level of noncompliance.

4.2 Future Requirements

The USEPA or the State DEP may promulgate applicable requirements that will become applicable to the facility after the application for an Operating Permit is submitted to the Department, but prior to the Operating Permit expiration date. This may be a common occurrence with EPA's MACT Standards. If this situation should pertain to your facility, you must include the date the provision will become applicable for your facility, a statement that the facility will comply with the applicable requirement on a timely basis, and a detailed compliance schedule, if such a schedule is expressly required by the applicable requirement.

5.0 Developing a Compliance Schedule

After you complete the *Compliance Plan Forms*, you know if you are in compliance with the all applicable requirements. You must develop a compliance schedule for each applicable requirement for which the facility is not in compliance at the time the Operating Permit Application is submitted to the Department. Your compliance schedule shows how and when you will come into compliance. If you meet all Rules and Regulations that apply to you when applying for an Operating Permit, do not prepare a compliance schedule.

Your compliance schedule begins the day you submit your application. If violations are corrected before you submit the Operating Permit application, you do not need to develop a compliance schedule or certify the noncompliance with the associated Rule or Regulation. If you choose to begin your corrective action early, document your activities. Remember, if your corrective action includes performance testing, this must be done according to State requirements.

The schedule should be achievable and needs to show the NJDEP you are striving to attain compliance in the shortest period possible. Your schedule must also specify how often you will report your progress to the NJDEP.

5.1 Your Compliance Schedule

Your compliance schedule must include the following elements:

- Narrative of how you will achieve compliance
- Steps you will take to achieve compliance
- Dates when you will achieve these steps
- How you measure your progress toward compliance
- A proposed schedule for submitting progress reports to the NJDEP at least every six months. (For more information on developing a reporting schedule see *Section 5.3* Compliance Schedule Reporting)
- A schedule for the periodic submittal of compliance certifications, prepared in accordance with N.J.A.C. 7:27-1.39.

Your schedule must be enforceable. Measuring your progress through appropriate monitoring, recordkeeping, and reporting practices must be possible. Indefinite time frames are not enforceable. If your facility is subject to any order, ACO, or consent

decree, the proposed schedule of remedial measures will incorporate the order, ACO, or the consent decree, and shall be at least as stringent as the order, ACO, or the consent decree.

For example, you need to install pollution control equipment to comply with an emission limit. Your compliance schedule will consist of several steps. For example, you must first determine the most appropriate control equipment for your operations, select a vendor, purchase and finally install the equipment. All of this may take several months. You also need to do a performance test showing you are in compliance by using the control equipment. Your schedule should show the dates when you will:

- Determine the control equipment you need and select a vendor
- Purchase the control equipment
- Install the equipment
- Submit a test protocol
- Set up a pretest meeting
- Conduct the performance test
- Submit your test results, and
- Fulfill other compliance demonstration requirements.

NJDEP staff will review your proposed compliance schedule in your application. The NJDEP may need to modify your schedule to ensure it is enforceable. You will have a chance to discuss the schedule and any language changes with NJDEP staff while they draft the permit. We will insert the full compliance schedule into your draft permit.

5.2 Compliance Schedule Progress Reporting

Your compliance schedule must include a time frame for submitting progress reports to the NJDEP. You must submit these reports at least every six months. You may propose, or the Department may require, more stringent progress report submittals. Unless you propose otherwise in your application, progress reports are due in accordance with the schedule in effect. The progress reports must include the following information:

- Your scheduled deadlines for achieving compliance, including intermediate milestones.

- The dates when you achieved such milestones or compliance.

- An explanation why you did not meet any requirement or deadline. If this happens, you must also state what you did, or plan to do, because of missing any deadline to get back on schedule and to limit emissions.

- Any required monitoring data. You must also state if the monitoring data still shows a violation.

Your compliance schedule progress report must be certified in accordance with N.J.A.C. 7:27-1.39.

6.0 Shields Against Enforcement Action

New Jersey's permit Rule includes two additional provisions that protect you from enforcement action in some situations. These are the application shield and the permit shield.

6.1 Application Shield

Federal Regulations and State Rules include an application shield to protect you from enforcement action for not having a permit while you are waiting for issuance of your permit. The application shield protects you if you have submitted a timely and complete permit application.

According to Section 70.5(a)(2) of EPA's Part 70 Rule, the facility's ability to operate without an operating permit shall be in effect from the date the application is determined or deemed to be complete until the final Operating Permit is issued, provided that the applicant submits any requested additional information by the deadline specified by the permitting authority. This "application shield" allows a facility to operate even though it is not covered by a valid Operating Permit, until the Department takes final action on the application. Without an application shield, the facility is subject to penalties for operating without an Operating Permit from the application deadline until the Department issues an Operating Permit.

N.J.A.C. 7:27-22.7(b) provides that an application shield can apply only if two conditions are met: (1) the application is submitted within the application deadline set forth in N.J.A.C. 7:27-22.4, General Application Procedures; and (2) the application is administratively complete by that deadline. According to N.J.A.C. 7:27-22.7(c), the protection afforded by the application shield begins on the date the application is due to the Department. If either of the two conditions for the application shield is not met, the application is ineligible for the application shield.

The application shield does not apply if you miss your permit application deadline or if your application is incomplete. The application shield does not restrict the NJDEP's or the EPA's authority to take enforcement action for any other past violations.

6.2 Permit Shield

A permit shield states that compliance with the conditions of the Operating Permit will constitute compliance with all applicable requirements which form the basis for the Operating Permit conditions. Each Operating Permit is required to include a list of all facility specific applicable requirements as referenced in N.J.A.C. 7:27-22.16, Operating Permit Contents, and EPA's Part 70 Rule. These applicable requirements

are then implemented for the particular facility through specific Operating Permit provisions.

The shield encourages development of a thorough Operating Permit which omits no applicable requirement. N.J.A.C. 7:27-22.17(b) specifies how the scope of the permit shield will be detailed in initial operating permits, renewal operating permits, and changes made to an operating permit through a significant modification. Changes made through administrative amendments, changes to insignificant sources, seven-day notice changes or minor modifications will not be shielded, because such changes will not have been subject to public comment.

Facilities may seek acknowledgment that specific provisions of an applicable requirement do not in fact apply to their operations within the exemption section of the Compliance Plan (*Section 97*) to ensure complete coverage of the Operating Permit application permit shield. The facility specific information section of the Compliance Plan (*Section 90*) contains potential applicable requirements for the facility as a whole.

N.J.A.C. 7:27-22.17(d) provides that any applicable requirement omitted from the permit shall not be covered by the permit shield. N.J.A.C. 7:27-22.17(e) provides that the permit shield may be nullified if the terms of the Operating Permit were based on inaccurate or incomplete information supplied by the applicant. Finally, N.J.A.C. 7:27-22.17(g) specifies that a permit shield does not alleviate any liability by the owner or operator for noncompliance with the Operating Permit.

It also should be noted that according to N.J.A.C. 7:27-22.9(i), concerning affected Title IV facilities, neither a permit shield nor any other provision in an Operating Permit may alter or affect the applicable requirements of the Acid Deposition Control Program required by Title IV.